BOSTON MEDICAL LIBRARY
IN THE
FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE

Digitized by the Internet Archive
in 2026

https://archive.org/details/international-medical-magazine_1896-02_5_1

INTERNATIONAL

MEDICAL MAGAZINE.

AN ILLUSTRATED MONTHLY, DEVOTED TO

MEDICAL AND SURGICAL SCIENCE.

EDITED, UNDER THE SUPERVISION OF

JOHN ASHHURST, JR., M.D., LL.D., AND JAS. T. WHITTAKER, M.D., LL.D.,

Barton Professor of Surgery and Professor of Clinical Surgery in the University of Pennsylvania; Surgeon to the Pennsylvania Hospital, etc.,

Professor of the Theory and Practice of Medicine in the Medical College of Ohio,

BY

HENRY W. CATTELL, A.M., M.D.,

Demonstrator of Morbid Anatomy in the University of Pennsylvania; Pathologist to the Presbyterian Hospital; Coroner's Physician of the City of Philadelphia, etc.

VOL. V.

PHILADELPHIA, PA.:

INTERNATIONAL MEDICAL MAGAZINE CO., PUBLISHERS,

716 FILBERT STREET.

NEW YORK: 144 EIGHTH STREET. LONDON: 10 HENRIETTA STREET, COVENT GARDEN

1897.

BOSTON MEDICAL
JUN 27 1899
LIBRARY.

Copyright, 1896-97, by International Medical Magazine Company.

CATALOGUED
JUN 27 1899
E. H. B.

Printed by J. B. Lippincott Company, Philadelphia.

INTERNATIONAL MEDICAL MAGAZINE.

CONTRIBUTORS TO VOL. V.

Abbe, Robert, M.D., of New York.

Ashhurst, John, Jr., M.D., LL.D., of Philadelphia.

Ashhurst, William W., M.D., of Chihuahua.

Babcock, R. H., M.D., of Chicago.

Beck, Carl, M.D., of New York.

Bell, Robert, M.D., F.F.P.S.G., of Glasgow.

Bondurant, E. D., M.D., of Tuskaloosa.

Bowditch, Vincent Y., M.D., of Boston.

Bowen, Cuthbert, M.A., M.D., F.R.M.S., of Barbados.

Burrell, Herbert L., M.D., of Boston.

Cattell, Henry W., A.M., M.D., of Philadelphia.

Collins, Joseph, M.D., of New York.

Crouch, H. C., M.D., of Denver.

Cumston, Charles Greene, B.M.S., M.D., of Boston.

Curtin, Roland G., A.M., M.D., Ph.D., of Philadelphia.

Dejerine, Professor, of Paris.

Dejerine, Madame, of Paris.

Dudley, William F., M.D., of Brooklyn.

Friedenwald, Julius, A.B., M.D., of Baltimore.

Gibson, W. M., M.D., of Utica.

Goodspeed, Arthur W., Ph.D., of Philadelphia.

Hersman, C. F., M.D., of St. Louis.

Hinsdale, Guy, A.M., M.D., of Philadelphia.

Ingals, E. Fletcher, A.M., M.D., of Chicago.

Jourdan, Maurice, M.D., of Marseilles.

Keen, W. W., M.D., of Philadelphia.

King, Clarence, M.D., of Machias.

Knight, Frederick I., M.D., of Boston.

Kramer, Dr., of Cincinnati.

Lyon, H. N., M.D., of St. Louis.

Magill, William S., M.D., of Paris.

Morton, Thomas G., M.D., of Philadelphia.

Mulhall, J. C., M.D., of St. Louis.

Munro, John C., M.D., of Boston.

Murphy, John B., A.M., M.D., of Chicago.

Musser, J. H., M.D., of Philadelphia.

Oliver, Charles A., A.M., M.D., of Philadelphia.

Osler, William, M.D., F.R.C.P. (Lond.), of Baltimore.

Park, Roswell, M.D., of Buffalo.

Ransohoff, Dr., of Cincinnati.

Riggs, C. Eugene, A.M., M.D., of St. Paul.

ROBERTSON, J. STEELE, ESQ., of Melbourne.

ROBINSON, W. D., M.D., of Philadelphia.

SEILER, CARL, M.D., of Philadelphia.

SPILLER, WILLIAM G., M.D., of Philadelphia.

STEELE, J. DUTTON, M.D., of Philadelphia.

STELWAGON, HENRY W., M.D., of Philadelphia.

STOCKTON, CHARLES G., M.D., of Buffalo.

TAYLOR, A. E., M.D., of Philadelphia.

TAYLOR, JOHN MADISON, A.B., M.D., of Philadelphia.

THOMAS, J. D., M.D., of Pittsburg.

TUSSEY, A. EDGAR, M.D., of Philadelphia.

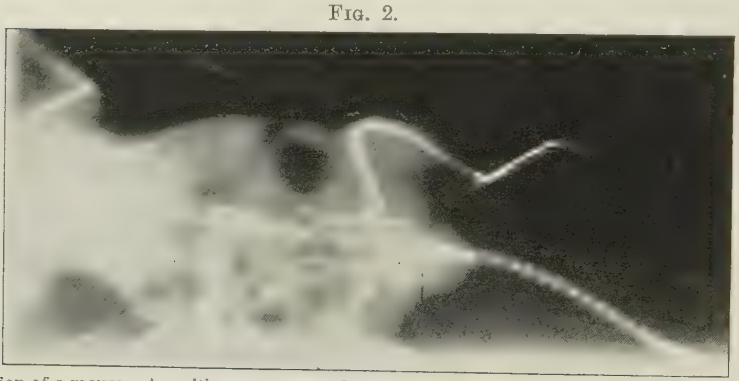
VANDER VEER, ALBERT, M.D., of Detroit.

WATHEN, WM. H., A.M., M.D., of Louisville.

WHITTAKER, JAMES T., M.D., LL.D., of Cincinnati.

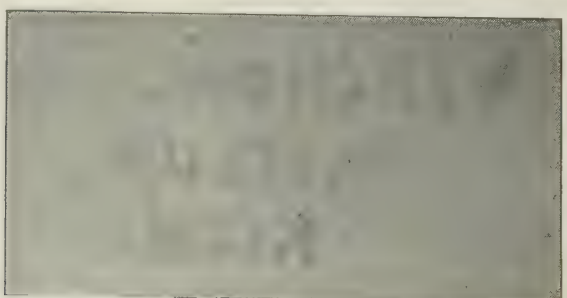
Human hand skotographed by exposure to a Crookes tube for one and a quarter hour

FIG. 2.



Portion of a mouse. A positive was prepared, and the half-tone cut has been made from this.

FIG. 3.



The words have been written with chromate of lead oil-paint on an ordinary visiting card; this was placed on eight thicknesses of orange photographic paper, and then skotographed. The name printed on the card in printer's ink does not appear, while the other words are of course reversed.

BOSTON MEDICAL
JUN 27 1899
LIBRARY.
4968

INTERNATIONAL
MEDICAL MAGAZINE.

Vol. V.] FEBRUARY, 1896. [No. 1.

ORIGINAL COMMUNICATIONS.

RÖNTGEN'S DISCOVERY AS APPLIED TO MEDICINE.[1]

BY HENRY W. CATTELL, M.D.,
Demonstrator of Morbid Anatomy in the University of Pennsylvania.

THE discovery by Röntgen,[2] professor of physics in the University of Würzburg, of a peculiar form of energy, marks a new era in practical medicine, for we are now able by this process to produce pictures of bones and certain other substances, such as glass, bullets, and pins, when covered over by the soft tissues of the living body. The imagination of the reader will at once suggest the manifold uses to which such pictures can be put, and, according to the accounts in the daily papers and from our own experiments, results have already been obtained but little expected even a few months ago. The process of taking a *skotograph* (σκοτός, darkness), so called in contradistinction to a *photograph* (φῶς, light) or a skiagraph (σκία, a shadow), is very simple; in fact, so easy of accomplishment that, now the process being known, one wonders, as is often the case in similar instances, why it has not been discovered before.

The technique is as follows: An ordinary photographic plate is introduced into a *wooden* plate-holder,[3] which in turn is placed upon a firm table. The hand or other object to be skotographed is now rested upon the

[1] Paper read before the Philadelphia Pathological Society, February 13, 1896.

[2] I have references, not yet verified, which show that the passage of rays from a Geissler's tube through wood was known earlier than 1887.

[3] Or the plate may be wrapped in several thicknesses of orange or black paper.

plate-holder,[1] and a Crookes tube[2] is arranged from three to five inches above the object, so that the x- or cathodic rays will fall perpendicularly upon the object. An ordinary Ruhmkorff coil and several cells are sufficient to supply the electrical current, though a higher frequency current is better, as the time of the exposure can thus be materially lessened. In the physical laboratory of the University of Pennsylvania, where, through the kindness of Professor Arthur W. Goodspeed, experiments have been carried on by the writer, the length of time has been an hour or more, while in other places with more perfect apparatus even four and a half minutes have sufficed. Such apparatus will be, however, set up in the course of a few days. After exposure the sensitized plate is developed by any of the ordinary methods, and prints can then, of course, be prepared from the negative. In the frontispiece will be seen several untouched half-tone reproductions of skotographs taken from among the objects first employed by the writer, and others may be found in the *Medical News* of February 15.

It would indeed be interesting to see a skotograph of the entire human body, though difficulty will be met with in those places where the shadow of one bone will be cast upon another, the bones being at different distances and planes from the sensitized plate. Edison is trying to overcome this by fixing numerous places from which the x- rays will emanate. The superimposing of the skotograph upon the photograph, the latter possibly in color, would certainly make a novel and instructive picture, especially if an anaglyphic effect could be produced at the same time.

I have seen the fresh specimens from two post-mortems where an unsuspected jack-stone was lodged in the larnyx. As the tissues here are capable of being skotographed by the apparatus already at our command, the laryngologist has a new instrument which he can use for such purpose.

In regard to the preparation of pictures from morbid growths it may be expected that even here the new discovery will be of some use, as the intensity of the shadow due to the different thickness of the tissue through which the rays will act may be shown up in the plate. Thus an absent or horseshoe kidney, an abscess, or a tumor might possibly be discovered. Perhaps it can be told when the hip-joint has become fixed in coxalgia.

The sad part attached to a new discovery such as this is the false hopes that will be raised among the laity from the newspaper reports, as the increase in our means of diagnosis has always kept far in advance of treatment, unless of a surgical nature. The last mail brought a letter in which

[1] If the plate-holder is perfect, the room need not be darkened.

[2] See any work on physics, or an encyclopædia.

a mother grasps at the false hope that her daughter will be benefited by skotography. She writes, "I have a daughter twenty-five years old who has suffered from epilepsy induced by scarlet fever for twenty-one years, with partial paralysis of the left side. Her mind has been somewhat disturbed, and last summer she was taken to the asylum. . . . Would it be possible to locate the brain difficulty with the new discovery?"

From our present knowledge it would therefore seem—

1. That a new means of medical diagnosis has been added by Röntgen to the already large list at our command.

2. The discovery will prove especially valuable in diseases of the bones, more particularly if these are of a surgical nature.

3. Many new uses for skotography will be discovered as time goes on, the process will be amplified, the shadow brought to a focus, etc.

ON SIX CASES OF ADDISON'S DISEASE, WITH THE REPORT OF A CASE GREATLY BENEFITED BY THE USE OF THE SUPRARENAL EXTRACT.

BY WILLIAM OSLER, M.D., F.R.C.P. (Lond.),

Professor of Medicine, Johns Hopkins University.

Nine cases of this rare affection have fallen under my observation. In two of these I made the dissection of the nerves and capsules.[1] A third case I reported in conjunction with Dr. J. C. Wilson in volume xiii. of the *Transactions of the Philadelphia Pathological Society.* The additional six cases, which I here give, have not been previously recorded.

Recent studies render it very probable that the original view of Addison is correct,—namely, that the symptoms of the disease are caused by loss of function of the adrenals. The evidence on which this is based is readily available in the elaborate Goulstonian Lectures of Rolleston,[2] in the address of Professor Schäfer[3] on Internal Secretions, and in a paper by Dr. Oliver.[4] On this view the disease is analogous in all respects to myxœdema, and is caused directly by the loss of the internal secretion of the glands. The comparison between these two diseases has frequently been drawn. As far back as 1885, in an article on Addison's disease in Pepper's "System of Medicine,"[5] I used the following words:

---

[1] Ross, Transactions of the Canadian Medical Association, vol. i., 1877, and Pepper, Transactions of the College of Physicians, Philadelphia, Series iii., vol. viii.

[2] British Medical Journal, 1895, vol. i.

[3] Lancet, 1895, vol. ii.

[4] British Medical Journal, 1895, vol. ii.

[5] Vol. iii. p. 947.

"The relation of affections of the thyroid gland to myxœdema and cretinism, and the experimental production of these conditions by the removal of the thyroid, have widened our view of the importance of the ductless glands. It is interesting to note the analogy between myxœdema and Addison's disease. In both there are distinct histological changes in the tissues—in one an increase in the mucin, in the other an increase in the pigment—and in both marked nervous phenomena: mental dulness, a progressive dementia in myxœdema, a profound asthenia in Addison's disease. We regarded the thyroid as unimportant to life until the experience of surgeons and extirpation in monkeys by Horsley demonstrated that abolition of its function was followed by a serious train of symptoms; and perhaps the experimental removal of the suprarenals in monkeys—so much more closely allied to man than the animals hitherto experimented upon—may demonstrate that these little bodies are also not without their influence upon health.

"Although the view of disturbed innervation consequent upon involvement of the abdominal sympathetic meets the case, theoretically, better than any other, and is at present widely held, yet there are signs of a return to the old view of Addison."

The analogy will be complete if it be found that in suitable cases the use of the suprarenal extract cures Addison's disease in the same remarkable way that the thyroid extract relieves myxœdema. Clinical workers may now contribute their share by carefully studying the effects of the extract in selected cases. Addison's disease is so rare that every opportunity should be seized. At the same time the greatest caution should be exercised, on the one hand, to select only well-characterized cases, and, on the other hand, to exclude cases in which the condition is a concomitant of widespread tuberculosis.

Case I.—Failing health for a year; attacks of faintness; bronzing of face and hands; sudden death. (Abstract.)

A. J., aged about forty, lawyer, consulted me in the spring of 1885, complaining of weakness and attacks of faintness. He was a healthy-looking, well-nourished man, of good family history. For about a year he had been overworked and worried, and had had at times dyspepsia. On one occasion, in court, he felt very faint and almost fell. On two or three other occasions he felt very weak and prostrated without any obvious cause. For nearly a year he had noticed a gradual darkening of the skin of the face and of the hands. At the suggestion of his physician he sought an opinion as to the existence of Addison's disease. The patient's general condition was so good, without anæmia, loss of flesh, or any signs of tuberculosis, and the pigmentation was so slight and limited, that doubt seemed reasonable. Dr. Pepper saw the case with me, and we agreed that the pigmentation and causeless fainting spells were, to say the least, suggestive, and we advised him to give up business for a year and live quietly abroad. He went home prepared to follow our advice, arranged his affairs, and made preparations for his trip, when one morning he dropped dead in a railway station. There was no autopsy.

CASE II.—Gradual asthenia; progressive bronzing of the skin; attack of syncope; nausea and vomiting. Autopsy: cheesy foci at apex of left lung and in bronchial glands; tuberculosis of the adrenals; very slight matting of the semilunar ganglia and nerves.

Nellie R., aged forty-one; admitted to the Philadelphia Hospital July 2, 1886, with great weakness and bronzing of the skin. Her father and mother both died of heart-disease, one sister of dropsy, and one of heart-disease. She had small-pox when a child; otherwise she has been a very healthy woman until a year ago, when she was attacked suddenly with great pain in the region of the heart and with dyspnœa. The distress lasted for at least three days. Until April of this year she has been in fairly good health, except that she seemed more languid than formerly and felt indisposed to work.

Last November her friends noticed that she was changing in color, and throughout the winter her normally fair complexion has been replaced gradually by a dark bronze. Three weeks before admission she had a sudden attack of syncope, preceded by dizziness in the head. Shortly afterwards she began to vomit after meals, and has done so almost every day since. She has had no pain anywhere.

Present Condition.—Small, somewhat emaciated woman. Face, neck, and hands deeply, general surface of the trunk slightly, pigmented. The bronzing of the face is extreme; it is interesting to note that on the forehead the deep small-pox scars are unpigmented. The skin of the abdomen is much darker than that of the thorax; the fingers are not clubbed; the nails are incurved; the pulse is 96, small and thready; the heart-sounds are clear and loud; there is slight flattening beneath the clavicles at both apices, and the percussion note is a little high pitched, and there are a few râles on deep inspiration. The abdomen is soft; no pain on deep pressure in the epigastrium; no tenderness on either side in the renal regions. There is no pigmentation of the mucous membrane of the mouth. The color of the lips is fairly good; no anæmia; temperature 98° F.

The patient had most profound anorexia with great prostration, and once or twice vomited small quantities of blood. She gradually sank and died on the 13th.

Autopsy.—Body not emaciated; skin of face, neck, hands, and arms of a light bronze color; marked pigmentation of abdomen. On the inner surfaces of cheeks a dark patch on either side. Vaginal mucosa not pigmented; panniculus over abdomen three-fourths of an inch in thickness.

Peritoneum.—Adhesions between the surface of the liver and the diaphragm. The omentum is adherent to the wall of the pelvis. In thorax there are adhesions at the right apex and general adhesions at the left side. The heart contains fluid blood and clots. The valves are normal; the muscle substance is a little pale.

Lungs.—The left is crepitant except at extreme apex, and in two or three small areas of anterior margin, which show cheesy foci surrounded by gelatinous infiltration. The right lung is everywhere crepitant. The pleura is thickened, particularly at the apex. The bronchial glands are caseous.

Stomach.—Everywhere throughout the mucosa are small white bodies about two millimetres in diameter. There is pigmentation towards the pylorus; no erosions and no other special changes.

The *spleen* is of average size, closely adherent to the diaphragm, and the pulp looks normal.

The *liver* is small, united closely to the diaphragm. There are no tubercles, but in the adhesions on the right border is a small caseous body the size of a pea.

The *intestines* show no special changes except a slight enlargement of Peyer's patches and the solitary glands.

The suprarenals and sympathetic ganglia were dissected *in situ*.

The right splanchnic nerve is large, and a ganglion existed on it opposite the tenth dorsal vertebra. The left nerve is not so large and presents a smaller ganglion. The right nerve enters the semilunar ganglion, which is readily dissected, as it is not specially involved in cicatricial tissue. On the left side the ganglion is large, but also readily separated from the adjacent tissue. The nerves joining the two ganglia and those about the cœliac axis are less distinct than usual, owing to the slight matting of the tissue. The nerves passing to the suprarenals are free.

The capsules are not much enlarged. The right is six centimetres long, very firmly adherent to the liver and to the inferior cava. The left, six centimetres in length, is closely united to the kidney and to the spleen. On section the right capsule presents no trace of normal gland tissue. The lower half is occupied by a large cheesy mass, the central portion of which presents a grayish translucent, fibrous tissue. The remainder of the organ is made up of a similar tissue in which are small cheesy nodules. Behind the *vena cava* there is also a solid caseous mass. The left capsule presents a firm, cheesy nodule just where its main vein emerges. The organ is flat and made up of a gray, translucent, fibrous tissue.

The kidneys are of average size. The left presents numerous small tubercles and one or two caseous masses which are in close proximity to the suprarenal capsules. In the pelvis the broad ligaments, ovaries, and tubes are closely matted together by old peritoneal adhesions.

The dissection of the nerves and adrenals is in the Mütter Museum of the College of Physicians in Philadelphia.

CASE III.—Dyspepsia and occasional attacks of vomiting for two or three years; for some months gradual pigmentation of the skin and mucous membrane of the mouth; attacks of dizziness; extreme prostration and anæmia; profuse diarrhœa; urgent vomiting; death; no autopsy.

William S., aged fifty-nine, longshoreman; admitted June 30, 1887, to the Philadelphia Hospital, complaining of vomiting and great prostration. With the exception of yellow fever, in 1864, he had enjoyed very good health until three years ago, when he began to have dyspepsia and occasional attacks of vomiting. He has, however, kept at work.

For many months past (he does not know the exact time) he has himself noticed, and his friends have remarked, that he was becoming very dark in color. Eight days before admission he had an attack of dizziness, in which he fell but did not lose consciousness. Since then he has been extremely prostrated and the attacks of vertigo have become more frequent.

Condition on Admission.—Large, well-nourished man; slight œdema of the feet. Skin of the face, neck, and hands of deep mahogany brown. General surface of the body very much darker than ordinary; sclerotics are pearly. The lips are pale, and there is evidently marked anæmia. Mucous membrane of the lips and inner side of the cheeks deeply pigmented, and a large patch can also be seen on the soft palate.

The lungs are entirely negative: no râles at the apices; no dulness; no sign of old tuberculous disease. The apex-beat is in the fifth interspace. Pulse 96, small. There is a venous hum in the vessels of the neck; no hæmic murmur at the base of the heart.

There is marked pain on pressure over the tenth and twelfth ribs on the left side; none on the right. The blood showed the characteristic features of an extreme anæmia, and the blood drop looked very watery. The count gave one million red corpuscles per cubic millimetre. Proportion of white to red one to four hundred.

The patient sank rapidly after admission; had profuse diarrhœa and urgent

vomiting, and died July 6. The temperature ranged from 98.2° to 101.4° F. So far as could be ascertained from the patient himself and his friends, there had been no tuberculous disease in his family.

This is the only case of Addison's disease which I have seen with profound anæmia, a symptom on which Addison laid a good deal of stress. In a majority of the cases the blood count does not fall below fifty or sixty per cent. A difficulty sometimes arises in the diagnosis of the disease in cases of severe anæmia of the progressive pernicious type which have irregularly mottled pigmentation. I have recently seen a case in which, with the progressive anæmia, there was a degree of asthenia and gradual pigmentation highly suggestive of Addison's disease.

CASE IV.—Gradually developing languor and asthenia; frequent attacks of causeless vomiting; progressive pigmentation of the skin; convulsions; toxæmia; death. Autopsy: sclerosis and atrophy of the adrenals; no tuberculosis.

David A., aged fifteen and a half, a patient of Dr. Mullin's, of Hamilton, Ontario, who consulted me by letter about him, and who very kindly sent me the suprarenal capsules for examination.

The patient's father died at forty-five from pulmonary tuberculosis of four years' duration. The mother is a healthy woman; the brothers and sisters are healthy.

The boy had suffered from no serious illness in early life, and had good health until the onset of the present illness. In March he had a slight febrile attack, in which he was confined to bed for two days. Early in April his mother noticed that he appeared to be sunburned, and she thought it was due to wearing his Scotch cap too long in the spring. He seemed also languid and listless, and did not seem able to apply himself to study. Early in the summer he was taken from school, as he fretted and cried frequently on account of the scoldings. Ever since the attack in March he has had at intervals of three or four weeks attacks of vomiting, in which he brought up greenish and yellow matter, after which he felt better. In the summer the mother noticed that the skin became much more discolored. He was very indolent and took but little exercise and did not engage in any sports. His complexion was fair and his hair of a light color and thin, so that his discoloration, which deepened through the summer, was very marked. He had at times very severe headache, and sometimes acted strangely, as if silly.

His final illness is so graphically described by Dr. Mullin that I give his statement in full.

"On Monday of this week he complained of sickness and headache. On Wednesday he did not rise from bed; that night he slept and did not complain. On Thursday he was languid and stayed in bed; vomited a little green matter; said he had no headache, but had a bad taste; he was dull and heavy; his eyes appeared strange, and he acted as if he did not wish to be disturbed. About 2 P.M. he took a little oyster-soup; this was taken quickly, and he then turned to the back of the bed; later he vomited slightly. About 5 P.M. he would not answer questions; turned to the wall as if he wished to sleep. A little before 6 P.M. a convulsion occurred, not violent; the limbs were fixed; he was quite unconscious, face a little drawn, and slight frothing; the hands jerked slightly. After this he did not speak, except to say 'yes,' 'yes'; he would put out his tongue and open his mouth, and then turned away and moved to the back of the bed. A few minutes after the convulsion he was seen by a physician, who said that the movements were very similar to those of an hysteri-

cal patient. I saw him at nine o'clock the same evening. He was not unconscious, but did not seem able to fully understand. He moved to the front of the bed at my request, but soon turned and moved to the wall. The pulse was feeble and could not be counted at the wrist; the hands were cold; temperature in axilla, 100° F.; it had fallen one degree since taken after the convulsion. The tongue was a little furred, yellow; the breath seemed foul. During the night he was very restless, tossing from side to side and pulling the bedclothes. He passed urine once; at this time he asked for the vessel. The next morning I visited him at ten. The hands were cold, bluish, nails blue; pulse so feeble that it could not be counted at the wrist; heart-impulses, 132 per minute. Occasionally he made a deep sighing inspiration.

"The brownish discoloration of the skin very marked on the face, the shoulders, and anterior part of the thorax; the surfaces of the extremities discolored, but not so deeply; the integuments of penis and scrotum much darker than elsewhere, and the areola around each nipple was discolored as in pregnancy. Along the spinous processes from the level of the scapular spines to the sacrum was a row of ten spots about the size of a quarter of a dollar more deeply discolored than the surrounding skin. No pigmentation of the mucous membrane of the mouth; the breath was offensive; urine free from albumin and sugar.

"Until the afternoon he was very restless, pulling the bedclothes, and tossing about from side to side, and at 4 P.M. one-third grain of morphine was given hypodermically. After this he became more quiet, and when I visited him at 9 P.M. he was sleeping. He continued quiet during the night, and died the following morning about nine o'clock."

Dr. Mullin was kind enough to give me the opportunity of examining the suprarenals, sections of which I showed one evening at the Pathological Society of Philadelphia. Unfortunately, the specimens and sections of both this and the following case have been mislaid. Both capsules were extremely small, not half the normal size, and surrounded by much fat. They were firm, and on section showed no distinction between the medullary and cortical portions. Microscopically, there was a condition of diffuse sclerosis, with here and there areas of fatty degeneration. There was no tuberculosis of the organs.

CASE V.—Attacks of vomiting and indigestion for eight months; gradual pigmentation of the skin; intense prostration; death. Autopsy: tuberculosis of both adrenals; no involvement of other organs.

William B., aged nine, a patient of Dr. William E. Parke, of Philadelphia, Pa. The boy was at Girard College, and according to the doctor's statement he had seen him, on and off, for about eight months, during which time he had been repeatedly admitted to the infirmary with attacks of vomiting and indigestion, occasionally with a mild tonsillitis. His color had changed and he had become very much bronzed, but this was suggested to have been due to a dark ancestor. His last illness was characterized by most intense prostration and weakness, and obstinate vomiting. There was no elevation of temperature; the pulse had been rapid, but on the morning of his death it came down to forty.

I made the autopsy on the 28th of March, 1888. Unfortunately, the notes which I dictated to Dr. Parke at the time were mislaid. The skin was uniformly pigmented and about the color of a mulatto's. There was no enlargement of the lymph-glands; the heart and lungs were normal; no tuberculosis; no involvement of the lymph-glands in the abdomen; no changes in the stomach or intestine. The suprarenal glands alone were diseased. Both looked small; the right was larger than the left, and presented a flattened tuberculous mass about the size of an almond,

the left a smaller mass in the upper part of the gland. There was no thickening or adhesion about the semilunar ganglion in the nerves passing to the glands.

CASE VI.—Pulmonary tuberculosis; injury two years ago; dyspepsia; gradual asthenia; pigmentation, deepening for nearly two years; treatment for eight months with suprarenal extract; rapid disappearance of the serious symptoms; marked and persistent improvement in general condition; no change in the pigmentation.

William H., aged forty-six, sail-maker, admitted to the Johns Hopkins Hospital May 3, 1895, complaining of cough, shortness of breath, great weakness, and a change in the color of his skin.

Family History.—His father died of cholera morbus and his mother from the effects of a stone in the bladder. He had three brothers and two sisters, all of whom are dead. He does not know of what the brothers died. One sister died in confinement; the other from poisoning by mercury. He knows of no tuberculosis in his family, and none of his relatives have had discoloration of the skin.

Personal History.—When a child he had measles, diphtheria, chicken-pox, and mumps, and when about seventeen years of age, varioloid. In his sixteenth year he served on board a man-of-war at Panama, where he had a protracted fever of nearly four months' duration. Shortly after this he had jaundice for a month, since when he has never had a very healthy or natural-looking color of the skin. Ten years ago he had two attacks of severe pain in the hypochondriac and epigastric regions, lasting about five hours. He was doubled up with the pain and had to have morphine. The attack was not followed by either jaundice or chills. In July, 1893, the patient was run over by a wagon, the wheels passing over his abdomen just below the navel. He was laid up for two months, and suffered a great deal of pain in the abdomen. There was no paralysis afterwards, but he has not been very strong since. For two years the skin has been growing darker in color, and his friends have noticed that within the past five or six months the pigmentation has become much more intense. He has had at intervals throughout his life attacks of indigestion, and at times belching, but no vomiting. Twelve years ago he had an attack of diarrhœa, which lasted for a week. During the past two years he has lost very much both in flesh and strength, and for some months has had no ambition whatever for his work.

He is uncertain how long he has had a cough, but five weeks ago he began to have a great deal of cough with much muco-purulent expectoration. He has not had any pain, but he has suffered a great deal with shortness of breath on the slightest exertion, and he has the dyspnœa even when resting quietly in bed. There have been profuse night-sweats. He has been losing flesh rapidly, and has become very weak. The appetite is poor, but he has had no nausea and no vomiting. He has had no palpitation of the heart.

Present Condition.—The patient is a small-framed, poorly-nourished man; height about five feet, eight inches; present weight ninety-nine pounds. Temperature on admission was 101° F.; pulse, 136; respiration, 40. The eyes are sunken, and he looks very apathetic. One's attention is immediately attracted by the intense pigmentation of the skin, particularly of the face and forehead, which is of a uniform deep brown with irregular patches of a darker color. The lips and mucous membranes are not anæmic. On the roof of the mouth there are two patches of pigmentation; on the velum there is slight pigmentation; no spots on the lips, cheeks, or gums. The skin of the hands and wrists is of a very deep bronze color. The pigmentation is more marked in the axillæ and at the bends of the elbow. The areolæ of the nipples and the genitals are dark brownish-black in color. The general surface of the body shows a marked bronzing. There are areas of very deep pigmentation on

the shins, and there is accentuation of the bronzing on either side of the great toes. The superficial glands are not enlarged. The epididymes and testes are normal. The pulse is regular, of medium volume, tension normal, the vessel wall slightly thickened.

The thorax is symmetrical, expansion slight, both clavicles prominent. The percussion-note is slightly impaired in the right front, and here from the second space there is a well-marked friction rub, heard throughout the mammary and axillary regions and around to the back, throughout the infrascapular area. At both apices behind there are a few fine moist râles. On the left side auscultation is negative. The sputum the day after admission was very abundant and frothy, containing a considerable quantity of greenish muco-pus, but tubercle bacilli were not found.

The apex-beat of the heart is in fifth interspace, just outside the nipple line. The sounds are everywhere clear.

The abdomen is somewhat retracted, nowhere tender; the border of the liver is not easily palpable; no increase in the area of liver flatness. The spleen is not palpable; neither kidney can be felt.

There is no enlargement of the thyroid or of the lymphatic glands; no nodes or lesions of the bones.

From the date of admission to May 16, the patient's temperature ranged from normal to about 101° F. The pulse-range was from 120 to 130; respirations from 25 to 35. He expectorated about two hundred and fifty cubic centimetres of sputum, which was examined every other day for tubercle bacilli, but without result; and no elastic tissue was found. The patient has been in bed, and the general prostration and the rapidity of the heart-action have been out of all proportion to the amount of local disease of the lung.

On May 16 the treatment with suprarenal extract was begun. Thirty-six pigs' suprarenals were obtained at the time of slaughtering, cut up finely, thoroughly powdered with pestle and mortar, and to this mass about six ounces of pure glycerin were added, and the whole allowed to macerate for thirty-six hours in a refrigerator. The mixture was then filtered several times through fine-meshed gauze. The filtrate consisted of a reddish-brown syrupy fluid of a rather disagreeable odor. After filtering there were thirty-eight drachms of the extract, so that one drachm corresponded to a capsule. The patient began with half a drachm of the extract three times a day.

The patient's blood-count when he began the treatment was: red corpuscles, 4,564,000; leucocytes, 6600; hæmoglobin, eighty-five per cent.

On May 20 tubercle bacilli were found in the expectoration for the first time. The cough and shortness of breath had been very much better. Prior to the treatment with the suprarenal extract the patient had gained one pound. The note by Dr. Thayer on May 24, eight days after beginning the use of the extract, was: The patient looks brighter and says he feels better. The pulse, which had ranged from 120 to 140, is now 100. He has gained three pounds in weight.

On June 6 the amount of the extract was increased so that he took the equivalent of three glands daily. Numerous careful blood-counts were made, and a differential count of the leucocytes. There was moderate leucocytosis; there were no nucleated corpuscles. The number of reds on June 6 was about 4,000,000 per cubic millimetre; leucocytes, 8000.

After May 20 the patient's temperature remained normal.

During the week ending June 16 the patient gained five and a half pounds,—a gain of nine and a half pounds since the use of the extract was begun. The patient continued to take the equivalent of three glands daily. A note by Dr. Thayer on June 19 is as follows: Temperature has been quite normal for more than a month. The pulse, which had ranged between 120 and 140 to the date of beginning the extract, has gradually fallen until during the last week the range was between 84 and

104. The amount of sputa has diminished to less than forty cubic centimetres in the day. The patient says he feels much better; his appetite is good, and he looks a great deal brighter. The condition of the lung has improved, and the friction murmur is no longer heard.

On June 28 tubercle bacilli were found. The treatment was continued throughout July and August, and in spite of the hot weather he improved progressively. The gain in weight was remarkable. In July his weight increased from one hundred and ten and a half to one hundred and fifteen pounds. In August, during the very hot weather, he lost again slighly in weight.

He left the hospital on September 10. The change in his condition had been very remarkable. When admitted he could scarcely walk to the bed, and was profoundly asthenic and emaciated. The general appearance had improved wonderfully; he was bright and active, and said he felt vigorous. His weight on discharge was one hundred and eighteen pounds, a gain of nineteen pounds. The pigmentation was unaltered.

Since his discharge he has been at work, and has reported at the hospital occasionally. He felt so well that throughout the latter part of November and December he remained without any of the suprarenal extract, and he lost three pounds in weight in that time. His condition to-day—January 15, 1896—is as follows:

The color is good. To me his face looks a little less pigmented, but Dr. Thayer, who had the patient in charge during the summer, while he was in the ward, does not think that there is any material change in the face, but thinks the discoloration is less intense on the trunk. It is still of a very advanced grade, such as is seen only in the most typical cases of the disease. The small patches of pigmentation on the palate have disappeared. The local condition in the lung has cleared, and there are now only a few râles to be heard occasionally on coughing. The friction is still audible just outside the right nipple. The change in the patient's general vigor is remarkable. He walks briskly, is active, energetic, in very good spirits, and says that he is as well as he ever was in his life.

THE CONNECTIONS OF THE FILLET WITH THE CEREBRAL CORTEX.[1]

BY PROFESSOR AND MADAME DEJERINE,

Salpêtrière, Paris, France.

THE fillet is regarded as the course pursued by the sensory impulses passing from the medulla oblongata towards the brain. The ancient conception of the sensory tract of Meynert, adopted by Huguenin, Charcot, Ballet, and Brissaud, is in reality no longer admitted. According to Meynert, the sensory fibres arising in the nuclei of Burdach and Goll form after decussation in the bulb the external or sensory portion of the pyramids, traverse the anterior region of the pons, constitute farther on the external tracts in the base of the cerebral crura, and finally radiate in the occipital

[1] Translated by Dr. Wm. G. Spiller, assistant pathologist to the Pennsylvania Institution for Feeble-Minded Children.

lobes. This is an opinion now abandoned, for Flechsig has shown that the external tract of the base of the cerebral crus does not form the sensory decussation of the bulb, but that it is arrested in the pons, and that it constitutes a cortico-pontine union. One of us has shown, besides, that this external tract of the base of the cerebral crus derives its origin not from the occipital lobe, but from the middle part of the temporal lobe, and that it degenerates after lesions of this part.

In 1885, Edinger and Flechsig showed that the fibres of the sensory decussation originating in the nuclei of Goll and Burdach formed the inter-olivary layer of the bulb, and in the pons the band of fibres of a rectangular appearance, situated at the junction of the anterior and posterior regions of the pons, and known by the names of main tract of the fillet, upper fillet, lemniscus, *obere Schleife, ruban de Reil médian*, etc. This part of the fillet was ignored by the ancient authors, who recognized only that portion which was visible on the lateral face of the tegmentum, above the pons, between the posterior corpora quadrigemina and the crusta, and which they named laqueus, lateral triangular tract of the pons. This is now known as the lower fillet (*untere Schleife, ruban de Reil inférieur*). We know, further, that the lateral or lower fillet has nothing to do with the sensory decussation, that it constitutes a small superadded band, which connects the superior olive with the posterior corpora quadrigemina, and that it represents one of the central connections of the auditory nerve.

The superior connections of the upper fillet afford a very complex study. Before Forel (1877) it was acknowledged, with Meynert, that this tract entered the anterior corpora quadrigemina. Forel showed that it enters also the optic thalamus, and gave the name of obere Schleife (upper fillet) to the part which passes to the anterior corpora quadrigemina, and of Thalamusschleife (thalamus fillet) to the optic thalamus portion of this tract. Flechsig (1881), relying on the anatomy of development, and von Monakow (1884), depending on the experimental pathology, admitted that the upper fillet is in connection with the cerebral cortex, especially with the parietal lobe; but while, according to Flechsig,—whose opinion has been adopted since by Bechterew, Edinger, and Obersteiner,—this continuity is uninterrupted, according to von Monakow it is interrupted, and is formed by the mediation of the thalamus. This cortical tract was designated by von Monakow by the name of Rindenschleife (cortical fillet). According to the majority of the authors, it is the internal portion of the upper fillet which contains the fibres of the thalamus fillet and of the cortical fillet; the external part contains the fibres to the anterior corpora quadrigemina; it contains besides—according to Flechsig and Bechterew, whose opinion has been shared by Edinger, Obersteiner, and Henschen—fibres which enter into the constitution of the ansa lenticularis, and pass to the corpus subthalamicum, and to the globus pallidus of the same side; according to Bechterew some fibres are conveyed through the intervention of the commissure of Meynert to the globus pallidus of the opposite side. When the

upper or main fillet is injured by a primary lesion occupying the *pons*, its fibres degenerate in two directions. On account of this fact, which is indisputable, most authors have admitted that the upper fillet contains several kinds of fibres, some of which present a *descending* degeneration, others an *ascending*. The majority admit even that the degeneration of the fibres of the fillet is especially a *descending* degeneration, and that the cells of origin, or trophic cells of this tract, are located in the superior regions of the neural axis (anterior corpora quadrigemina, optic thalamus, corpus subthalamicum, globus pallidus, cerebral cortex).

The cases of degeneration of the fillet following lesions of the pons are not rare, and have been recorded by Homen, Kahler and Pick, P. Meyer, Spitzka, etc. We have been able ourselves to study personally three cases, in which the lesion occupied the superior or middle part of the pons, being situated at the junction of the formatio-reticularis and the anterior portion of the pons, and destroyed nearly all the upper fillet and the greater part of the pyramidal tract. In these three cases the degenerated fibres of the upper fillet can be followed above the primary lesion as far as the region of the anterior corpora quadrigemina, and the inferior part of the optic thalamus, *but not beyond*. The posterior segment of the internal capsule especially is absolutely intact, as well as the ansa lenticularis, the corpus subthalamicum, the globus pallidus, and the commissure of Meynert. Below the primary lesion in our three cases an almost complete atrophy of the interolivary layer exists on the same side. An atrophy of the internal arciform fibres of the bulb and a diminution in volume of the nuclei of Goll and Burdach are found on the opposite side.

When the fillet is injured in the bulb,—be it at the level of the interolivary layer (Kahler and Pick), at the level of the decussation of the pyramids (Schultze), or in advance of or at the location of the nuclei of Goll and Burdach, as we have been able to establish in two cases of syringomyelia with destruction by the glioma of the nuclei of Goll and Burdach, and as P. Meyer, Rossolimo, Hoffmann, Schafer, Miura, and Schlesinger have noted,—there is observed an ascending degeneration of this tract, a degeneration which, as in cases of pontine lesion, cannot be followed beyond the subthalamic region and the inferior part of the optic thalamus. In our own two cases of destruction of the nuclei of Goll and Burdach the posterior segment of the internal capsule is absolutely intact.

The ascending degeneration of the fillet following a lesion of the nuclei of Goll and Burdach is confirmed also by the experimental researches of Vejas, Singer and Münzer, and especially by those of Mott. In five cases of ablation of the nuclei of Goll and Burdach in the monkey, this author has not been able to follow the degeneration of the fillet beyond the subthalamic region.

It results, then, from these facts that the degeneration of the fillet following lesions of the pons or bulb is an ascending degeneration, and that *this degeneration cannot be followed beyond the inferior part of the optic*

thalamus. Let us consider now the condition of the fillet following lesions of the subthalamic region, of the optic thalamus, and of the cerebral cortex.

When a lesion of the optic thalamus, of the subthalamic region, or of the superior portion of the cerebral crus destroys the fillet, an atrophy of the upper fillet is observed, as Witkowsky, Schrader-Hitzig, Henschen (Cases XI. and VIII., vol. iii.), Hösel, Jacob, and Greiwe have noted.

We have been able to study by the method of seried microscopic cuts four cases of ancient lesions of the thalamus and one case of lesion of the subthalamic region, involving the sublenticular portion of the internal capsule and the tract of Türck, and cutting the fillet in the subthalamic region. We have established the following facts:

The lesions of the optic thalamus involve the fillet when they are ancient, and when they occupy the inferior and posterior portion of this ganglion, especially the median centre of Luys, and, above all, the field of fibres situated at the posterior and external part of the nucleus just mentioned,—a field which, as shown by seried cuts, comprises the continuation of the fibres of the upper fillet.

The same is true of lesions which are located in the subthalamic region or in the tegmentum of the cerebral crus, and which involve directly the upper fillet.

But in all these cases it is a process of *slow atrophy*, without degeneration properly so called, able, however, to end in the complete disappearance of the fibres.

This atrophy diminishes from above downward, from the thalamus towards the nuclei of Goll and Burdach, and is proportioned to the degree of destruction of the fillet and to the period of survival of the patient.

In the case of the lesion in the subthalamic region, which existed twenty years, the atrophy of the fillet, very intense in the tegmentum of the cerebral crus and in the superior part of the pons, was much less marked at the level of the bulbo-pontine fissure; the interolivary layer of the bulb and the internal arciform fibres of the opposite side were relatively very little involved.

The same condition existed in the four cases of lesions occupying the inferior part of the optic thalamus, but in these cases the atrophy of the fillet did not pass beyond the bulbo-pontine fissure. The interolivary layer, the decussation of the sensory fibres in the bulb, and the internal arciform fibres of the opposite side were only slightly diminished in volume.

We believe that in these cases of atrophy of the fillet following thalamic, subthalamic, or crural lesions it is an atrophy *retrograde, cellulipetal,* —*i.e.*, developing from the periphery of the neuron towards its cell of origin, and analogous to that which occurs after a long period in the central or cellulipetal segment of an encephalic or medullary tract sectioned by a lesion.

In other words, we are inclined to admit—and in this we follow the

opinion of von Monakow—that the upper fillet is largely composed of fibres of which the cells of origin are located in the nuclei of the columns of Burdach and Goll. According to our opinion it has not been demonstrated that the thalamus contains cells of origin for fibres which go to the nuclei of Goll and Burdach. If these fibres exist, they are not, at all events, very numerous.

It is by an analogous process—that is to say, by a retrograde, cellulipetal atrophy—that we interpret the descending degeneration of the fillet which is found following lesions of the pons. If in the latter case the atrophy is much more intense than in crural, subthalamic, or thalamic lesions, it is not only because the destruction of the fillet is often in these cases more complete, but especially because the seat of lesion is nearer the cell of origin. It is, in a word, a process absolutely analogous to that which occurs, as Forel has shown, after section of a motor nerve. The atrophy of the central end of a sectioned nerve, which may result in the complete disappearance of the fibre and of the cell of origin, even in the adult, is proportionally more marked as the section approaches the point of emergence of the nerve. As to the connection of the fillet with the *cerebral cortex*, according to Flechsig and Hösel they are *direct*, according to von Monakow and Maheim they are *indirect*.

In 1890, Flechsig and Hösel reported, in support of the direct continuity of the fillet with the cerebral cortex, a case of porencephalia of the ascending parietal convolution with atrophy of the upper fillet in its entire extent. In 1893, Maheim, in reference to a personal case,—extensive cortical and subcortical lesion existing from early infancy and presenting an atrophy of the fillet,—remarked that the lesion of the fillet established by the authors preceding did not necessarily imply the existence of a direct cortical connection, but that it was probably in his case a secondary atrophy, and entirely comparable with those secondary atrophies, indirect in the sense employed by von Monakow, which are observed in the experimental method of Gudden on new-born animals. The facts elicited by the anatomico-pathological investigations which we have followed for several years regarding the course of encephalic tracts have established conclusions contrary to the opinion of Flechsig and Hösel. We have examined by this method of seried microscopic cuts nineteen hemispheres containing cortical lesions *without participation in the lesions of the central gray masses.*

The cortical lesions were more or less extensive, but in these nineteen cases they involved the Rolandic region and the parietal lobe. In all these cases a hemiplegia, very marked and with contracture, had been noticed during life, and in these different cases the duration of the lesions varied from ten to seventy-seven years. Of these nineteen cases three were cerebral infantile hemiplegia. However long the affection had lasted, however intense the degeneration of the pyramidal tract, *in none of these cases was the fillet degenerated.*

In the cases which had lasted a long time or begun even in infancy this

tract was diminished in volume, but it was a simple atrophy, a diminution of the calibre and not of the number of the fibres, no matter how great the secondary atrophy of the optic thalamus in these nineteen cases might be.

The recent experimental investigations of Bielchowsky (1895)—who established a perfect integrity of the upper fillet in two dogs after Goltz had removed the cerebral mantle and the corpus striatum—add new proof to the indirect connections of the fillet with the cerebral cortex.

According to our view, the fillet is likewise in no direct connection with the corpus subthalamicum and the globus pallidus, and is not continuous with the ansa lenticularis, as Flechsig, Bechterew, Edinger, Obersteiner, Henschen, and very recently Jacob (1895) have held. We have had the opportunity to examine three cases of very old lesions, at the same time cortical and central, which had destroyed, in a degree more or less marked, the island of Reil, the Sylvian operculum, the putamen, the caudate nucleus, and the globus pallidus. The internal capsule and the optic thalamus were, on the contrary, absolutely intact. In these cases a degeneration more or less pronounced of the ansa lenticularis and of the lenticulo-caudate fibres to the corpus subthalamicum existed. The degenerated fibres traversed the internal capsule, and could be followed in the corpus subthalamicum and in the optic thalamus, *but the integrity of the fillet was perfect.*

The study of the seried microscopic cuts, especially of horizontal cuts, shows (see our "Anatomy of the Nervous Centres," vol. i.) that the thalamic fasciculus of Forel and the field of Forel correspond to the superior and anterior part of the capsule of the nucleus rubra, and that they are separated from the upper fillet by the thickness of this nucleus. Whatever may be the fact as regards this last point, the investigations which we have just mentioned demonstrate that the fillet does not ascend directly from the nuclei of Goll and Burdach towards the cerebral cortex, but that the sensory path—bulbo-cortical—comprises two neurons,—viz., a neuron inferior or bulbo-thalamic, represented by the upper fillet, and a neuron superior or cerebral, connecting the thalamus with the cerebral cortex. Possibly there exists in the thalamus, as von Monakow believes, a short neuron interposed, which is represented by the type of cell with a short axis-cylinder described by Golgi. In no case can we support the hypothesis of Jacob, according to whom the cells of origin of the fillet are located in the thalamus or in the subthalamic region, and emit—analogous in this respect to the cells of the spinal ganglion—two axis-cylinders, of which one (cortical fillet) passes towards the cerebral cortex, while the other (upper fillet) branches out in the nuclei of the columns of Goll and Burdach. The lesions of the thalamus and of the subthalamic region, which we have reported above, in which the internal capsule (and consequently the cortical fillet) is absolutely intact, and in which the atrophy of the upper fillet is proportional to the period of survival of the patient, are absolutely contrary to this hypothesis.

FIBROMYOMA COMPLICATING PREGNANCY.

BY JOHN B. MURPHY, A.M., M.D.,
Of Chicago,
Professor of Surgery and Clinical Surgery, College of Physicians and Surgeons; Professor of Surgery, Post-Graduate Medical School and Hospital; Attending Surgeon, Cook County Hospital; Attending Surgeon, Alexian Brothers' Hospital; Consulting Surgeon, Hospital for Crippled Children; President of the National Association of Railway Surgeons, etc.

NETTIE S., aged thirty-nine, colored, was admitted to the Cook County Hospital October 19, 1895; family history negative. She was married two years ago; has had no children; no miscarriages nor abortions; has always enjoyed excellent health, with the exception of the present trouble. Menstruated at about fourteen; was regular, fairly profuse, lasting about four days; no clots, never hemorrhage. Present illness began in July, 1895, with a cessation of menstruation, which has not appeared since. She has not had sexual intercourse for three or four months. After the suppression of the menses, she noticed a tumor just below the umbilicus; it has since rapidly increased in size. It has not been accompanied with pain. There has been no backache; the greatest discomfort has been produced by pressure of the tumor against the edge of the ribs. No urinary symptoms; there has been no discharge.

Physical Examination.—Patient well nourished; large physique; considerable adipose; abdomen very markedly distended and irregular in contour. Nodular growth can be felt in the abdomen, extending above the umbilicus, and especially to the right side, where it presses against the margin of the ribs. One of the nodules below the umbilicus is about the size of a child's head, of hard consistence, and fairly movable. The whole mass can be moved laterally about two and one-half inches, but not up or down. In the median line, from two inches below the umbilicus to the symphysis, fluctuation can be felt. It is apparently deep-seated, and surrounded by an irregular margin. No fœtal heart-sounds nor placental souffle can be heard.

Vaginal examination reveals a large, hard mass, entirely filling the pelvis. The os can be felt above the symphysis. By pressing the tumor up, the sound can be introduced into the uterus two and one-half inches, but not farther, it being extremely difficult to get the os in position for the introduction of the sound. The tumor in the pelvis is very firm, smooth on its surface, and of very hard consistence.

Diagnosis.—Uterine fibroid, with cystic degeneration. The rapidity of growth and the absence of the history of hemorrhage somewhat oppose the diagnosis of fibroid, but this was explained subsequent to the operation.

Cœliotomy, October 25, 1895.—Tumor found to be free from adhesions. On lifting it out of the abdomen, through a very long incision, and turning it to elevate the large nodule out of the pelvis, the left broad ligament ruptured close to its attachment to the tumor. There was profuse hemorrhage for a few seconds. The ligament was clamped with a long pedicle-forceps, and the broad ligaments were ligated and excised. The uterus was situated on the anterior surface of the pelvic portion of the tumor, and was about six and one-half inches in length. An elastic ligature was placed upon the stump, allowing the cervix to remain, so as to treat the pedicle externally. Two large pedicle-forceps were placed above the ligature and the uterus

was amputated. There was blood in the pelvis. The parietal peritoneum was sewed to the cervix, all the way around, just below the elastic ligature. The abdominal wound was closed down to the pedicle, packed around with iodoform gauze, and dressed antiseptically.

Time of operation, twenty-two minutes. The mass weighed six pounds, six ounces. It consisted of a large irregular fibroid, growing from the posterior wall of the uterus. The uterus was enlarged about six inches and contained a sac of fluid. When opened, a fœtus of about three months was found in the sac, which had not been ruptured. The question of pregnancy had been thoroughly considered before operation, and thought impossible from the patient's statements and the absence of physical signs. The impregnation accounted for the great rapidity of the growth, it being borne in mind that the patient had never noticed the tumor till July.

The patient made an uninterrupted convalescence; she did not vomit from the anæsthetic, and at no time did her temperature reach 100° F. The highest pulse-rate was 96, and that was immediately after the operation. There was no secretion from the stump, which remained perfectly dry for fifteen days, when a slight serous exudate appeared at its base, the line of separation. The pedicle sloughed on the twenty-seventh day after the operation: the patient is now sitting up in bed.

This completes a series of ten consecutive abdominal hysterectomies, with ventral fixation of the pedicle, for large fibroids, not previously reported, all of which recovered.

That pregnancy should complicate uterine fibroma is not surprising, as Gusserow,[1] in quoting Bayle's statistics, states that twenty of every one hundred women over thirty-five years of age have fibromata of greater or lesser size; and Klob[2] states that forty per cent. of all women over fifty years of age have fibromata.

That pregnancy does not appear more commonly with fibroma is accounted for by the facts, first, that the fibroma itself tends to sterility, as it produces a pathologic condition of the endometrium, except in the sub-peritoneal variety; second, that the fibroma does not in the majority of cases attain a considerable size until after the childbearing period is passed; and, third, that the fibroma, in the great majority of cases, does not produce any disturbance during the period of gestation, and in many cases does not complicate labor. If it has attained a marked size before impregnation, its development is greatly enhanced by the pregnancy. The variety of fibroma in which the muscular element predominates over the fibrous increases most rapidly under the stimulus of pregnancy. The tissue becomes œdematous and doughy, as may be noted in the posterior wall of the uterus and the portion of the tumor attached to it in the specimen presented.

The uterine fibroid of large size rarely admits of the completion of the period of gestation, which usually terminates in abortion, hemorrhage, impaction of the pelvis, labor-pains, placenta prævia, rupture of the uterus, death of the fœtus, or sepsis. That the presence of fibroma with preg-

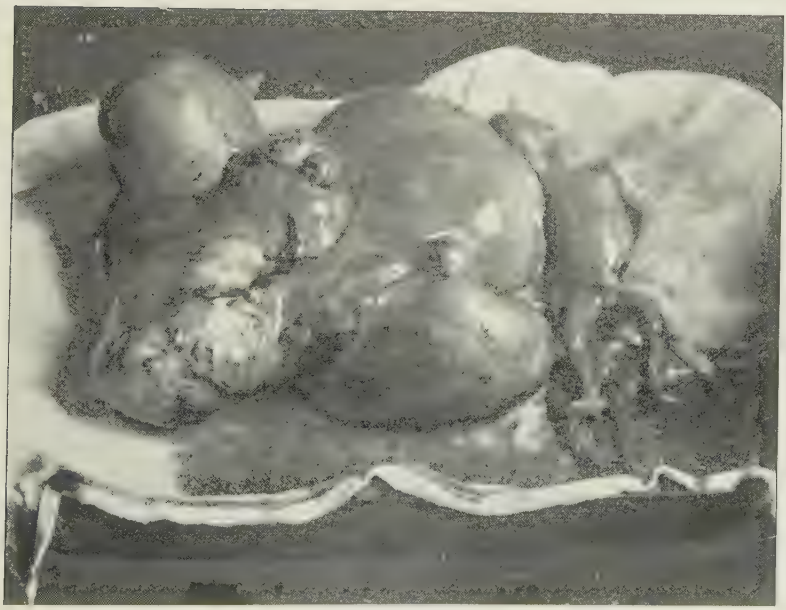
[1] Die Neubildungen des Uterus, 1886.

[2] Winckel, Ueber Myoma des Uterus, Völkmann's Sammlung klinische Vorträge, No. 98.

FIG. 1.

Position of fœtus in uterus with placenta attached.

FIG. 2.



Posterior surface of uterus and tumor with fœtus.

beautiful results produced by Schroeder, Landau, Fromel (four cases and one death), and others. The same author collected eighteen cases of supervaginal amputation of an impregnated myomatous uterus (first performed by Kaltenbach,[1] March 2, 1880), at different periods of gestation, ranging from two to eight months, by different operators, with seven deaths,—a mortality of about thirty-nine per cent.

From these statistics the operations of enucleation and amputation are to be considered very grave undertakings, both for the life of the fœtus and the life of the patient. Still, these statistics were collected before 1890, and the operation of abdominal hysterectomy had then a much larger mortality than now. It is to be hoped, therefore, that the statistics of the future, as well as those of the past two years, will show a great improvement in the results of the amputation of the gravid myomatous uterus over the period preceding 1890.

Landau concludes that hysterectomy should be the operation of selection, in submucous, intramural, and multiple fibroids, enucleation coming in question only where the tumor is pedunculated or of small size and subserous.

Contrary to general belief, the difficulties of operating on the impregnated uterus are less than in the non-impregnated, and Hoffmeyer says that whoever has seen an operation on the gravid uterus must admit that this statement is true. The vessels are larger, the uterine body is lifted up out of the pelvis, and the ligaments are more easily reached in the impregnated than in the non-impregnated uterus. The danger following the operation, he says, should be less, if care be taken to remove all of the placenta and membranes.

For operation, fibromata are conveniently divided into (1) impacted pelvic myomata. These are the most favorable for operation, and they usually originate from the cervix uteri, and can be enucleated through the vaginal wall without opening the peritoneal cavity. This procedure, says Chrobak, should always be followed, except where the tumor is larger than a child's head. (2) Extra- or retrovaginal impacted fibroids. These may originate in the cervix or in the lower portion of the corpus uteri, and are usually, in the process of the enlargement of the uterus, lifted out of the pelvis into the abdomen (Spiegelberg), and are removed by laparotomy. This may occur even though they be retrovaginal primarily and originate from the cervix. (3) Abdominal fibroids. The latter usually originate from the body of the uterus, and are removed by cœliotomy.

When should the operation be performed? In the process of enlargement the uterus lifts itself out of the pelvis; the fibroid may remain in the pelvis or accompany the uterus. The symptoms of impaction, as a rule, are transitory, as the uterus accommodates itself to its surroundings. If, however, these symptoms persist, they must be relieved, either by lifting the

[1] Centralblatt für Gynäkologie, 1893, No. 45, p. 1055.

uterus and tumor out of the pelvis or by enucleating the tumor. The rule laid down by Schroeder is that the operation should be postponed as long as possible. He says that the prognosis of hysterectomy is more favorable, particularly of retrocervical myoma, the later in pregnancy it is performed, and most favorable if performed at the end of gestation, because at this period we jeopardize the mother less and favor the preservation of the child. When the period of gestation is complete and abdominal section is indicated, we must then decide whether it shall be Cæsarean section, Porro, or hysteromyomectomy. The statistics of the Cæsarean section with fibroma show the results to be extremely discouraging; the majority of the cases terminated fatally, even with Sänger's method. The Porro, without the removal of the tumor, can be accomplished in only a small number of cases, and should not be attempted. Hysteromyomectomy is the most desirable as well as the most favorable to both the mother and the child. The question of treatment of the pedicle—shall it be extra- or intraperitoneal or a total extirpation?—must be decided by the individual operator, as each can obtain better results with the method with which he is most familiar. True, the extraperitoneal variety tends to longer convalescence, but it has the advantage of leaving the peritoneum practically without an abrasion.[1] Gusserow collected in all two hundred and twenty-eight cases; the mother died in one hundred and twenty-three, a mortality of about fifty-four per cent.; and sixty-seven children, a mortality of thirty per cent. This includes the operations performed in the preantiseptic period and a few in the antiseptic period, but does not include any cases of the aseptic era. Chrobak in 1893 successfully treated a case of this kind in which he performed total extirpation of the three-months' impregnated uterus with internal treatment of the stump. From Schroeder's stand-point, the most desirable time to operate is at the completion of the period of gestation, and the most favorable operation a hysteromyomectomy.

In the case here presented the indication was to immediate hysteromyomectomy, as it was not possible even to sound the uterus from the vagina, and delivery through the vaginal route could not be thought of. The tumor was producing pressure symptoms, and pregnancy had existed only three months. The broad ligaments were well elevated above the brim of the pelvis; the laceration produced in the left was caused by the great distance to which the uterus had to be elevated before the tumor, which was situated deep in the pelvis, could be turned out. The application of the ligature and clamps was less difficult than in the average abdominal hysterectomy where pregnancy was not present.

The statistics collected by Gusserow are certainly not encouraging for allowing the pregnancy to continue to the full period of gestation. It would seem that the operation at the seventh month should give more

[1] This can also be accomplished by the total extirpation, with only a line of suture in the peritoneum in the floor of the pelvis.

favorable results to the mother and scarcely less to the child, as the mortality to the latter is already thirty per cent. The cases reported by Dr. Thad. A. Reamy, of Cincinnati, Dr. William J. Taylor, of Philadelphia, Dr. Henry B. Stehman, of this city, Dr. Chrobak, of Vienna, and the case here reported are illustrations of the results that may be obtained in early hysteromyomectomy where the tumor is complicated by pregnancy.

WHAT AUSTRALIANS DIE OF.

BY J. STEELE ROBERTSON, M.D.,
Secretary of the Medical School, University of Melbourne, Australia.

LET me state at once that I here use the word Australia in the sense in which we, on the spot, generally use it. Most geographers restrict the name Australia to the continent proper, and use the word Australasia as a collective name for the Australian continent, Tasmania, New Zealand, British New Guinea, the Fiji Islands, Lord Howe, Norfolk, and Pitcairn Islands, and the outlying dependent islets. But when we Australians speak of Australia we generally mean neither the continent Australia nor the group Australasia, but what are known as "the seven colonies,"—to wit, the five mainland provinces of Queensland, New South Wales, Victoria, South Australia, West Australia, and the two insular provinces of Tasmania and New Zealand.

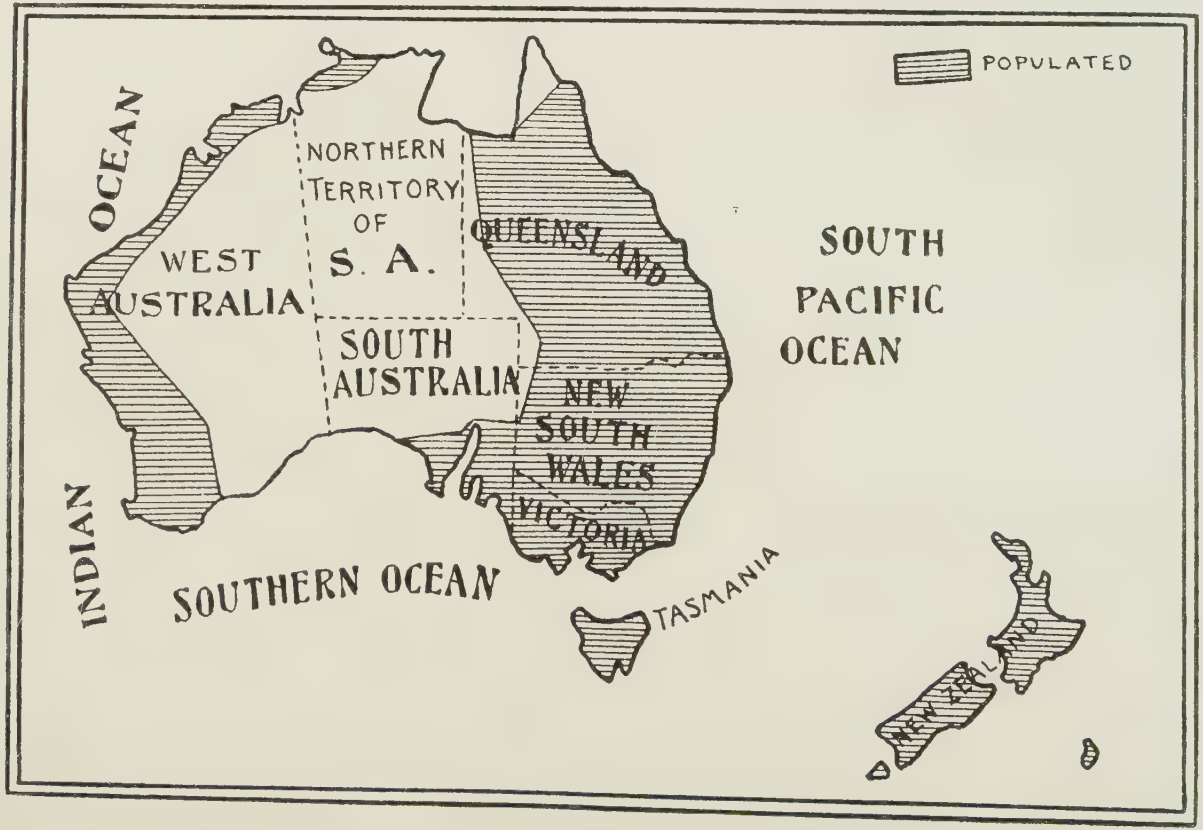
The accompanying map *A* shows the political boundaries of the seven colonies, while map *B* shows the natural divisions of the continent proper, —viz., the *Coast Margin*, the *Murray-Darling River System*, the *Central River System*, and the *Riverless Country*. In both maps the settled portions are shaded.

The populations of the Australian colonies on December 31, 1893, were estimated to be as follows:

Queensland	432,299
New South Wales	1,223,370
Victoria	1,174,022
South Australia[1]	341,978
West Australia	65,064
Tasmania	154,424
New Zealand	714,258
Total	4,105,415

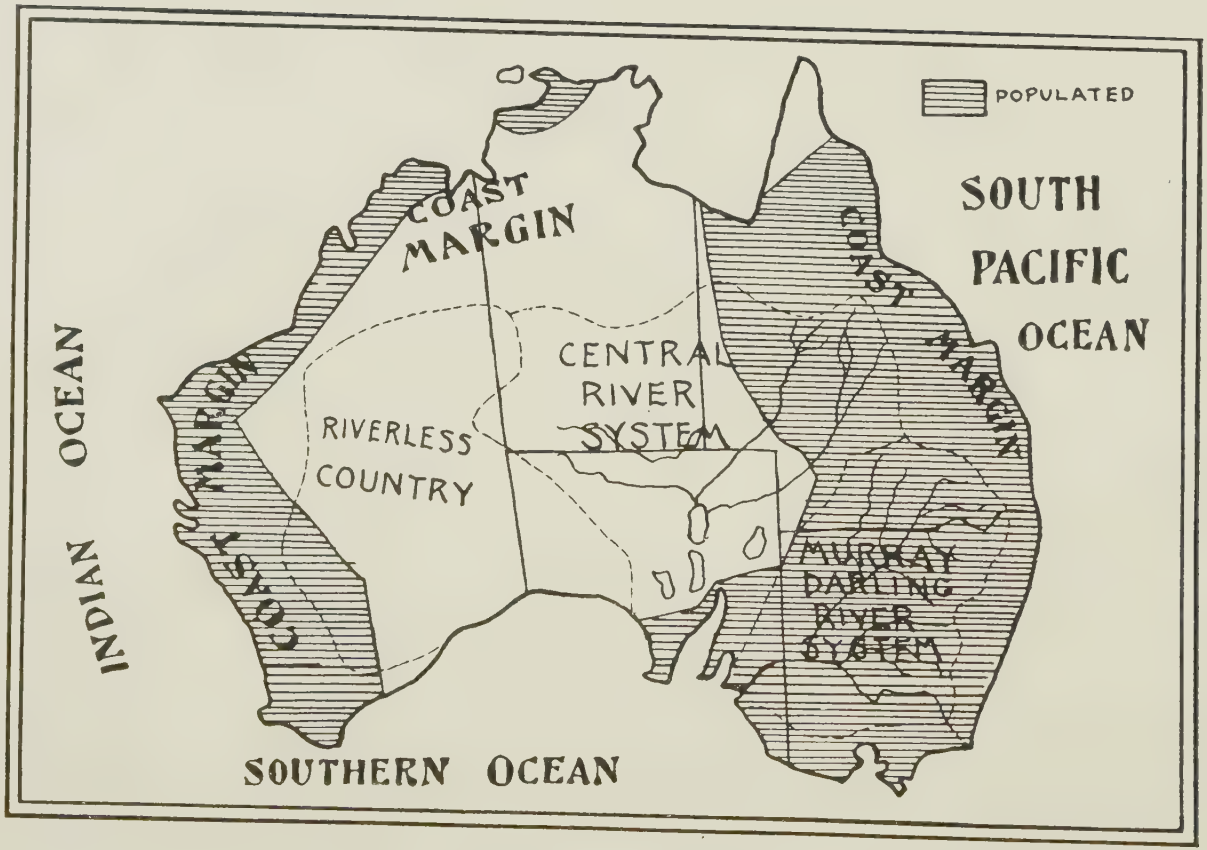
[1] Throughout this paper the Northern Territory of South Australia is treated as if non-existent, because (*a*) the white population is infinitesimal, (*b*) nothing of any value is known with reference to the vital statistics of the aborigines, (*c*) the vital records of the Northern Territory which do exist are so fragmentary as to be practically worthless, (*d*) the registrar-general of South Australia so treats this province. —J. S. R.

MAP A.



Australia.—Political divisions.

MAP B.



Australia.—Natural divisions.

It is not my purpose in this paper to indulge in obscure and tiresome mathematical statements of a decimally exact nature, nor to overwhelm the reader with great quantities of wearisome statistics. My aim is only to give a general outline of the nosology of Australia, based partly on the death statistics of the seven colonies, partly on information given in their year-books and reports, and partly on general knowledge and personal experience.

SALUBRITY.

Tested by the average death-rate for the decade 1884 to 1893, the *ascending* order of the salubrity of the Australian provinces runs thus:

West Australia	Death-rate,	16.85	per 1000
Queensland	"	15.70	" "
Victoria	"	15.37	" "
Tasmania	"	14.96	" "
New South Wales	"	14.14	" "
South Australia	"	13.00	" "
New Zealand	"	10.10	" "
Average	"	13.95	"

When these death-rates are compared with those of Europe, we find that during the same decade the average death-rate of the United Kingdom was 18.98, and that of all the countries whose records are available (*i.e.*, the Teutonic and Latin nations) only Scandinavia has an average death-rate for the decade which falls below 18.61. What better testimony to the salubrity of the Australian climate could be afforded?

CAUSES OF DEATH: BY CLASSES.

Considering the causes of death by classes, the usual order of fatality for the seven colonies as a whole is this: local diseases, constitutional diseases, zymotic diseases, developmental diseases, deaths by violence, ill-defined diseases, dietetic diseases, and parasitic diseases. In each separate province, as well as in Australia as a whole, local diseases hold first rank as death-producing agents; but there is nothing strange in that, since local diseases are more numerous than all others taken together. However, the order of fatality in the separate colonies does not always agree with the above table.

In *New South Wales*, *Victoria*, and *South Australia*, the three adjoining southeastern provinces, the order of fatality is exactly the same as the general order given above. This is accounted for by four facts: first, in each the mass of the settled country is in the Murray-Darling River System, the rest being on the Coast Margin; second, the climates agree very closely on the whole; third, the population is here most dense and under very similar conditions; and, fourth, the areas devoted to manufacturing, mining, agriculture, and grazing respectively are, roughly stated, in about the same proportion in each province.

New Zealand, though some twelve hundred miles distant from the mainland and surrounded by ocean, agrees with the general order of fatality, except in respect to deaths by violence, which are invariably more numerous than those from developmental diseases, herein reversing the usual sequence of these two causes.

Tasmania is quite a law unto itself, as an examination of the Bass Straits soundings on an Admiralty chart will prove beyond all cavil, and that although it is only one hundred and fifty miles from Victoria, and, as the physical geographers and hydrographers say, once formed a part of it. The Tasmanian order is: local diseases, developmental diseases, constitutional diseases, zymotic diseases, ill-defined diseases, deaths by violence, parasitic diseases, dietetic diseases. The rise in deaths from developmental diseases is accounted for by the extremely high proportion of deaths from "old age," for no less than seven-eighths of the deaths in the developmental class are from this cause. This fact and the small proportion of deaths from zymotic diseases patriotic "Tassies" point to with pride, as convincing proofs of the geniality and recuperative power of the Tasmanian climate and the purity of its atmosphere. For these Tasmania has to thank its geographical position, its small size, the tempering influence of the surrounding ocean, and the regular alternation of land and sea breezes. The value of Tasmania as a sanatorium is thoroughly recognized on the continent, which is evident from the fact that an immense number of people from the mainland who cannot afford the time or the money for the ocean trip to New Zealand regularly seek every summer a health-giving holiday in "the tight little island." When it is remembered that in Sydney, Adelaide, and Melbourne the daily midsummer temperature is about 100° F., accompanied by hot north winds laden with dust which last three days and which are followed by a thunder-storm, it can be imagined what delight fills the hearts of metropolitans from the mainland when they find themselves in a country which has a pure and genial atmosphere, a temperature 15° to 20° lower than that which they left behind them, and at the close of the day sea breezes which never fail.

While on the subject of the summer temperature on the mainland pardon me an illustration which is a digression. I remember one awful summer, about twenty years ago, when we had in Melbourne a north wind which ceased neither night nor day, and which lasted for seven days. The temperature was over 100° all the time. Suburban residents could not sleep in their houses, but lay out in the open air at night, on any vacant grassy space they could find. The natural accompaniments were epidemics of measles, scarlet fever, and typhoid fever. I sickened with measles myself, and on my way home from school, a few hours before taking to my bed, being under the influence of measles and in the ill-humor occasioned by it, I got into a fight with another boy, was "licked," and lost a good deal of blood. I was down for a week, and delirious most of the time. During my con-

valescence my daily entertainment was to sit at a front window and watch the funerals going by in what looked like one long procession. There were three gates in use at the Melbourne General Cemetery, and the funerals I saw were not going to the gate most used, but to the one second in importance. I remember wondering why the people who had died were all in such small coffins. Our kind old family doctor, on the day he said I might go out for the first time, told me I probably owed my absence from the funeral procession to the extensive bleeding my school-fellow administered to me. He also ordered me to thank that boy for the same the first time I met him. I did. Those funerals had taught me the value of the prompt surgical operation of bleeding.

Queensland, again, has an order of fatality of its own,—viz., local diseases, zymotic diseases, constitutional diseases, deaths by violence, developmental diseases, dietetic diseases, ill-defined diseases, parasitic diseases. The drop from fourth place to fifth in the deaths occasioned by developmental diseases is due to a very large decrease in the deaths from debility, atrophy, and inanition, and this in turn is probably due to the limitation of births, since, as the male population of Queensland is to the female population as four to three, it follows that marriage is necessarily limited because of the lack of opportunity. The fact that the deaths from zymotic diseases are more numerous than the deaths from constitutional diseases is easily understood when we consider that two-thirds of the colony in question is situated within the tropics. The increase in the number of deaths from violence and from dietetic diseases is not to be wondered at in a province where a tropical sun pours down its scorching rays, where the back-country is known as "the Never Never," and where the largest city outside the metropolis rejoices in the grim alliterative title of "*the City of Sin, Sweat, and Sorrow.*" There is a disproportionate rise in the number of deaths from violence, on account of the frequency of gun accidents, sunstroke, cases of drowning, horse accidents, accidents from too deep pearl-diving, general accidents which are the result of tropical pioneering, and cases of suicide. The cause of the rise in the number of deaths from dietetic troubles is found in a marked increase in the number of deaths that follow privation in the grazing country and "the Never Never," and in an increase in the number of deaths from alcoholism, chiefly as a result of "sprees" in the towns after long periods of abstinence up country.

West Australia, for the last few years, has been the scene of a wild hunt for gold, and the population is in such an abnormal and unsettled state, and the statistics are so unreliable and so unnaturally disturbed, that no generalizations can be made with any degree of certainty. From 1874 to 1883 the population steadily increased in a normal way, but from that time onward the increase was unnatural and irregular. This can best be seen by means of the following table, in which, to make the statement more graphic and easy to grasp, the numbers have been rounded off by giving the nearest fifty above or below the true number. The table shows

the way in which the population increased from 25,761 in December, 1873, to 65,064 in December, 1893.

1874–83, 10 years	Increase,	6000
1884, 1 year	"	1250
1885, 1 "	"	2250
1886, 1 "	"	4400
1887, 1 "	"	2900
1888, 1 "	*Decrease,*	351
1889, 1 "	Increase,	1550
1890, 1 "	"	2600
1891, 1 "	"	7000
1892, 1 "	"	5400
1893, 1 "	"	6400

Such irregularities in increase show that it is due to pathological causes, and not to normal growth, and in the case of West Australia the pathological cause is "gold fever." Another pathological symptom is that, whereas in 1874 females formed six-tenths of the population and in 1884 seventh-ninths, in 1893 the proportion had dropped to a shade over one-half. Any population showing such a record as the above is plainly outside the influence of the law. All that can safely be said of West Australia is that there is a very large floating population engaged in gold-prospecting and mining; that the mining camps have no sanitation, and that cleanliness is at a discount there. Water was for a long time so dear that those who hated grime used to brush the dirt off their bodies, instead of indulging in the luxury of bathing, and once in a while, when they could do without a wet wash no longer, they washed in bottled beer rather than go dirty. Bottled beer was actually cheaper than water. In the hotels and stores water was as dear as whiskey, and neither was cheap. A plunge-bath very often cost more five-dollar pieces[1] there than it would have cost quarters elsewhere. Even now (June, 1895), water at the mining camps costs from ten cents a gallon upward. In the face of all this is it a matter of wonder that in 1893 a serious outbreak of small-pox occurred (forty-nine cases and eight deaths), which was only prevented from spreading further by prompt and effective isolation in a special hospital? Or is it strange that during the latter part of 1894 and the beginning of 1895 typhoid fever simply scourged the mining townships and camps?

CAUSES OF DEATH: BY ORDERS.

The frequency of death has already been considered in regard to classes of diseases. Taking the causes of death now by orders, and only reckoning those classes which have been responsible for the deaths of more than one thousand Australians in 1893, a very fair index to frequency is obtained. The accompanying table well shows the order of fatality and the round numbers of deaths.

[1] Reckoned at five United States dollars to an English sovereign.

1. Constitutional diseases	8050
2. Diseases of respiratory system	6600
3. Diseases of nervous system	5550
4. Diseases of digestive system	5100
5. Miasmatic diseases	5100
6. Developmental diseases	4400
7. Diseases of circulatory system	3750
8. Ill-defined diseases	3000
9. Diarrhœal diseases	2500
10. Diseases of urinary system	1350

INFANTILE MORTALITY.

In the matter of infantile mortality Australia compares very favorably with other countries. The number of deaths in the case of children under one year of age ranges from 12.62 to every one hundred births in Victoria to 9.09 in South Australia. In Victoria the number is over twelve, in New South Wales and West Australia over eleven, in Queensland over ten, and in Tasmania, New Zealand, and South Australia over nine. The percentage in Europe ranges from 31.25 in Würtemberg to 13.19 in Sweden, Norway alone, with 10.49, coming lower. Thus the Australian colonies have lower infantile mortality than any European country except Norway. Infantile mortality is, as a rule, greatest in large towns,—that is, where the population is dense; so that, since Victoria is by far the most densely populated colony in Australia, the same rule will account for its proportionately excessive infantile mortality.

DEATHS FROM OLD AGE.

Connected by contrast with infantile mortality is longevity, and the number of those who attain a ripe old age shows that here again Australia stands well. The returns for 1893 show that in that single year some two thousand six hundred octogenarians had survived the storms and stress of active life, and finally died peacefully in their beds. Minute particulars are not available for all the colonies, so I can only quote a few Victorian particulars. No less than five thousand three hundred and twenty-one persons died in Victoria, during the decade of 1882 to 1891, at ages exceeding eighty years. Of these one thousand one hundred and forty passed their ninetieth year. Out of these veterans twenty just missed their centenary year, while another twenty just completed their century. But thirty-nine succeeded in going further. Seven saw out their one hundred and first year, ten their one hundred and second, five their one hundred and third, and five more their one hundred and fourth, while three just cleared their one hundred and fifth. Four successfully completed one hundred and six years, and two saw out one hundred and seven years. Of the three remaining, a trio of males, one died at one hundred and eight, one at one hundred and nine, and the last belated veteran among veterans lingered on into his one hundred and twelfth year. Of those who passed their eightieth year, but died before completing a century, three thousand

and thirty-one were males and two thousand two hundred and thirty-one were females; and of the fifty-nine centenarians thirty-three were males and twenty-six were females. Of those who succeed in passing their eightieth year, more than half die of that gradual death in life termed "old age." About one-fourth of the remainder die of lung-disease, one-fifth of brain-disease, and about one-fifth more of heart troubles, while the balance surrender chiefly to stomach disease, diarrhœal diseases, kidney troubles, cancer, and accidents. Influenza epidemics also are very trying to the old, carrying off the feeble and accelerating the end of those already diseased.

ZYMOTIC DISEASES OF CHILDREN.

The principal zymotic diseases affecting children are measles, scarlet fever, diphtheria, croup, whooping-cough, dysentery, and diarrhœa.

Measles in its non-epidemic form accounts annually for about 0.52 per cent. of the total deaths, but as an epidemic it is extremely fatal, a severe epidemic causing five per cent. of the deaths for the year, and sometimes more. But these epidemics are few and far apart, the usual interval being from six to eight years.

Scarlet fever usually causes 0.53 per cent. of the total deaths, but the rate has been steadily, though slowly, diminishing for years. Occasionally an epidemic of scarlet fever accompanies, or follows, one of measles. When this happens the fever is far more fatal than the measles. This occurred after and during the measles epidemics of 1866–67 and 1874–75, but during and after the three later epidemics the death-rate from scarlet fever was exceedingly low.

Diphtheria and *croup* are usually reckoned together, partly from similarity of symptoms and partly from the fact that they frequently coexist. They cause, separately or in conjunction, about 3.5 per cent. of the annual deaths.

Whooping-cough is accountable for about 1.5 per cent. of the yearly mortality.

Diarrhœal diseases have a very variable influence on the death-roll from year to year, as the rate rises and falls with the varying temperature, and yet does not have a constant ratio to the temperature.

PHTHISIS.

Except during the prevalence of epidemics, phthisis occasions more deaths by far than any other disease, diarrhœa being usually second. But whereas diarrhœa is usually fatal to infants and young children, the deaths caused by phthisis are chiefly from among the adults. In an average year about nine per cent. of the total deaths are from phthisis. But in all the Australian colonies the deaths from phthisis are materially increased by the deaths of persons who have come to Australia either already suffering from it or predisposed to it. From time to time the compulsory isolation of consumptives has been recommended, as well as means for insuring the

disinfecting of the sputa and all things coming in contact with patients. The other tuberculous diseases taken together also have a very large influence on the death-rate.

TYPHOID FEVER.

The death-rate from typhoid fever has fluctuated considerably; nevertheless it has well-marked maximum periods, when it causes six per cent. of the yearly mortality. But, on an average, the annual record for typhoid fever is 3.75 per cent. of the total deaths, and as many as thirteen per cent. of the deaths between ten and twenty-five years of age.

SMALL-POX

has never prevailed as an epidemic among the people of Australia. For example, in the last forty-two years in Victoria only twenty-six deaths from this disease have been recorded. Whenever persons sickening from it, or affected by it, have arrived in vessels, or have been discovered among the resident population, such persons have been promptly quarantined or isolated by government order before the disease had an opportunity to spread. Vaccination, also, is compulsory and well enforced throughout the colonies.

LEPROSY.

Lepers are present in all the colonies except Tasmania. The existence of about forty-five has been ascertained, and they are all at the leper stations. About half of these are Chinese, and one-fifth are Europeans, the remainder being South Sea Islanders (Kanakas), Maoris, Javanese, Singhalese, and Australian blacks.

HYDATIDS.

Hydatids in a fatal form appear to be much more common in Victoria than in any of the other Australian colonies, but this may be due to the inaccuracy of medical men in the other colonies, who often enter hydatid cases vaguely on their books as "disease of the liver," etc. Possibly, if more care were displayed in this connection, the annual percentage of the death-roll recorded against hydatids might be higher than the two per cent. and a very small fraction which it averages at present.

CANCER.

Cancer in a fatal form has apparently been fast increasing of late years, for while the deaths in 1885 from this cause numbered 1119, in 1890 they numbered 1653, and in 1891 no less than 1888. Part of this increase is, beyond doubt, due to an increase in the population and other causes,—very likely an increased accuracy in diagnosis of obscure or masked cases, and greater precision in the entries upon death certificates; but it seems highly probable that a real increase in the frequency of cancerous diseases is taking place in Australia, as elsewhere.

SUICIDES.

About four hundred and twenty suicides are recorded in Australia annually, about 0.8 per cent. of the annual deaths being from this cause. With men the order of preference is hanging, shooting, cutting, stabbing or drowning, and poison. With women it is drowning or poison, stabbing or hanging, shooting. Shooting is on the increase.

CONCLUSION.

From what has been said above it is evident that Australia, as a whole, compares very favorably with other countries in regard to general salubrity. As the settlement of the country increases and spreads, and as artesian wells are opened in the arid interior, a further improvement may be looked for. All over Australia natural hot-beds of diseases are being done away with. In the north the mangrove jungles are being cut away, in the centre the mud lakes are being reclaimed, in the south the swamps are being drained. Legislative interference with noxious trades and municipal drainage-systems is lessening the pollution of rivers, and extension of the powers of health-boards is doing away with buildings unfit for habitation, while building acts insure the erection of more sanitary dwellings. A federal system of quarantine has been instituted, and an assimilation of the health laws and medical acts of the different colonies is progressing. Adelaide and Sydney, the capitals of South Australia and New South Wales respectively, have already admirable water-systems of sewerage, and Melbourne, the Victorian metropolis, is now being reticulated by a sewerage system which will, before it is completed, cost over fifty million dollars. Lastly, Australia has the advantage of being a very young country, and in regard to sanitary matters is making good use of its opportunities.

REDUNDANCY OF RESPIRATORY SURFACE.

BY A. EDGAR TUSSEY, M.D.,

Instructor in Diseases of the Chest in the Philadelphia Polyclinic and School for Graduates in Medicine; Physician to the Out-Patient Department, Rush Hospital for Consumptives; Consulting Physician to the Young Men's Christian Association Gymnasium, Philadelphia.

Some time ago the author of this article published in the *Philadelphia Polyclinic* a treatise entitled "The Crepitant Râle frequently found in Apparent Health." Since writing the original article he has received from prominent members of the medical profession requests asking for results of further experience and for final conclusions or deductions. During the time intervening between the writing of the first communication and the present contribution ample opportunity for continuing his observations has been afforded to him.

For the benefit of those who may not have seen the first presentation of the subject we shall, as briefly as possible, summarize the principal points of interest. In our examinations of applicants for membership to the central branch of the Young Men's Christian Association Gymnasium we were impressed with the frequency with which we found a fine crackling râle which could be heard only during inspiration. To give to it a more serious appearance, the area over which it was heard was not infrequently more or less circumscribed. The presence of a sign which is almost invariably regarded as an evidence of a pathological condition of the alveolar structure of the lungs led to a thorough inquiry and investigation into its significance. Let me emphasize the fact that the character of the râle of which I speak, and which is not difficult to detect, could not be distinguished in any way from the crepitant râle of the early stage of croupous pneumonia or the râle heard in the incipient stage of pulmonary tuberculosis. A râle of such a character heard at the apex of a lung would lead us, with almost unerring certainty, to conclude that our patient was suffering from the condition known as incipient tuberculosis. So much for its character. The location in which it may be most frequently found is the region extending from the fifth to the eighth intercostal spaces on the left lateral wall, and with a strong preference for the anterior rather than for the posterior aspect of the region named. The râles, however, are not limited to this area, but may be found over the same space in the right lung or in other regions near the base of the chest.

After a most careful series of observations, we have arrived at the following conclusions, which we believe will be found to be correct:

1. Negatively, we note that the râles are not inflammatory in their origin or nature.

2. They are not a result of venous engorgement depending upon some valvular lesion of the heart, as no valvular trouble of any kind has ever been found to be present. On the other hand, the individuals in whose chests this sign is found are remarkable for the vigor of their circulation.

3. I have never found it to be a result of pathological changes in the constituents of the blood.

4. It cannot be traced to any disease of the pneumogastric nerve, as we have found no deviation either local or general from the normal type of nervous system.

5. It is not the sequel of an old pneumonic consolidation or of a pleuritic adhesion. On the contrary, the persons who have presented the condition to our notice have been remarkably free from pathological changes of the pulmonary structure.

6. These râles may not be traced to any hereditary tendency to tuberculosis, as hereditary influences are very frequently absent.

Those individuals in whom we note this condition of certain areas of the lung are very often remarkable for the beauty and symmetry of their muscular development, for their excellent past history, for their general

vigor when the râles were first noted, for their large vital capacity, for their wide range of chest motion, and for the complete development of the muscles of respiration.

This local condition is found among those in professional life, artists, scientists, and tradesmen, and may not be traceable to any particular occupation, sedentary or otherwise. I take it that their direct cause is a result of a passive transudation of a small amount of the fluid contents of the blood. The real cause of this transudation is the absence of a sufficient amount of air to produce a healthy condition of the circulation over the regions in which it is present. The presence of this local insufficiency of inflation is, without doubt, a result of the individual's having a redundancy of respiratory surface; certain areas, being partially supplemental, are used only to a limited extent. Since these are regions which offer the greatest amount of resistance to the ingress of air, they are, so to speak, laid aside by nature. Since the chest walls cannot expand to a sufficient extent to permit the entrance of air to every portion of the alveolar structure, it enters the apices and the portions which permit the greatest expansion.

To illustrate: An individual has a chest which, upon the fullest degree of expansion possible, will permit the elastic structure within to expand to the extent of raising the stem of a spirometer to two hundred and sixty cubic inches, the two hundred and sixty representing the limit of expansion possible within a chest of certain proportions and diameters. The two hundred and sixty cubic inches does not, however, represent the full number of inches which his elastic sac may contain; it has a capacity of two hundred and seventy cubic inches; ten cubic inches of its capacity has not been registered, nor can it be registered or used until he has developed the capacity of the case in which it is contained and by which its expansive power is limited up to two hundred and seventy cubic inches. Let it be understood that we do not designate as supplementary or redundant any area of vesicular structure which may be called into active use by a complete development of the inspiratory muscles. Any amount of respiratory surface that may be brought into use by a proper training of the chest muscles should not be regarded in any way as a surplus; nature intends us to use it and we are the losers by its inaction. But we have, in the results of our observations on the illustrative cases to which we shall now direct your attention, most conclusive reasons for the statement that nature has given to many individuals an amount of respiratory structure which the development of a large vital capacity and the fullest range of chest capacity and chest motion will not permit them to use. This thought was suggested to me some time ago by my friend Professor Thomas J. Mays, but I was not at that time prepared either to accept it or to reject it. I inclined to the belief that the moist areas which are to be found could be called into use to the extent of at least clearing up the râles. Certain moist areas exist because there is supplemental lung capacity.

Mr. A. presented himself for examination at the Young Men's Christian Association Gymnasium January 15, 1893.

We noted, Professor Chadwick and myself, his fine symmetrical muscular development; we questioned him carefully as to his past history of disease and with reference to the matter of hereditary influences of any kind that might be operative, finding nothing to account for the presence of a large number of well-marked crepitant râles. We excluded everything but the thought that the immediate cause of their presence was a local transudation of serum into partially inflated portions of the lungs; we believed, however, as before stated, that these areas could be made to disappear. We especially ask you to note the fact that Mr. A.'s vital capacity was at that time—two years ago—two hundred and sixty cubic inches and his range of chest-motion three and one-half inches. A short time ago Mr. A. reappeared for examination. We noted the same fine physical development, and found, upon inquiry, that his health since the first examination had been excellent. We were surprised to find that his vital capacity was not increased; his range of inspiratory motion is three and one-half inches, and his chest diameters have both increased.

After two years of training of his chest walls in such a way as to develop them to their highest capacity for work and with the attainment of a muscular development which added to his chest diameters, we find no increase in vital capacity, and the râles may be heard as distinctly as they could be heard two years previously.

Now, since we have been so careful to eliminate any thought of their inflammatory nature, and since we are familiar with the tendency of moisture to exude from the blood under conditions of diminished expansion, is it not a fair deduction to trace this local transudation to partially expanded areas?

We note râles present in the case of Mr. B., who has a vital capacity of two hundred and seventy cubic inches and the almost phenomenal range of five inches of inspiratory motion. Both Mr. A. and Mr. B. are only examples or types of a class with the same history, the same condition of more than average vital capacity, and the same wide range of expansion. The moisture, then, which points to certain areas which are not fully expanded, and such areas being present under such conditions as we have just mentioned, leads us to conclude, then, that the idea of a redundancy of alveolar tissue is in the highest degree probable.

In the process of development which the race has undergone, the changes in the chest walls and in the respiratory surface have not been commensurate, since the fullest range of motion of which the chest walls are capable will not permit the elastic sac contained within to expand to its fullest capacity. From the well-known beneficial effect of certain high altitudes in counteracting certain injurious influences which, in climates of a less elevation, produce a high percentage of consumption, we conclude that, other things being equal, such persons as those who possess this large breathing capacity

are much less liable to contract this disease than others, especially those possessing a small vital capacity and undeveloped chest walls.

In the event of the individuals under consideration becoming the victims of tuberculosis, a change of residence to a higher altitude would certainly be absolutely useless, since there are few people, even in the most lofty climes, who possess a range of motion amounting to more than five inches.

The amount of vital capacity which an individual possesses and the relation existing between vital capacity and range of inspiration have not been given that importance as criteriæ for sending patients abroad which they justly deserve. We look upon the ability to properly select cases which would be benefited by being sent to a foreign climate as a most important acquisition to our knowledge of medicine. When we consider the fact that a large number of people are annually sent away from their homes and friends, sacrificing the home care, which they are unable to obtain in distant lands, it behooves us to avail ourselves of every means in our power to advise them wisely. Is it not sad, too, to contemplate the fact that many are sent away to find only a sepulchre in the land in which life and health have been promised to them? It may be considered by some that it is well to inspire hope, if it is only for a short time; but we doubt very much if it is wise that hopes should be borne in the hearts of patients and friends to be so soon doomed to die prematurely. A hope that is like "the dew of the morning strung on tender blades of grass" should not be raised at so great a sacrifice. The mistakes that are so often made frequently react with a very unfavorable effect on the physician's skill. On the other hand, we should not, by a sad lack of knowledge, detain at home dear ones who could have life and health by exchanging a home climate for some distant paradise. Let us see to it, too, that if the bloom of health is to be found in some Elysian field we do not, by our ignorance, rob those who commit their precious lives to our care of the privilege of reaching out their hands to grasp its fragrant blossoms.

We may notice that persons with a very low vital capacity usually have a good range of motion, this range of motion being conditioned by the need which they have for every portion of their respiratory surface. To such patients a foreign field would offer little hope of improvement. Patients with an average respiratory capacity are not so liable to have their respiratory muscles as well developed as the class just mentioned. The demand upon the chest muscles of the latter class is not so great. A high altitude, by developing a greater range of motion, would render much service to this class of patients. We notice that where such a development is altogether possible in the latter case, it is not possible in the former instance. We observe, then, that those individuals who possess large areas of vesicular structure, a large vital capacity, and a wide range of motion have nothing to gain through the medium of diminished atmospheric pressure.

We may readily perceive under what pathological conditions of the heart and lungs a large amount of respiratory surface would be of immense importance to its owner. Such individuals suffering from pneumonia, especially of the croupous variety, pleurisy, or tuberculosis involving a large area would suffer much less from dyspnœa, as the demand for oxygen would be much less urgent. As the reserve force of the heart is called into play when its valves are stenosed or incompetent, so in the diseases enumerated the reserve force of the lungs is called into use and serves a most important purpose. Compensation, so to speak, is established. The balance of the respiration is, at least partially, restored. In the absence of the distressing dyspnœa present in such involvements the draft on the general vitality of the patient is not nearly so great. There is much less danger of cardiac or respiratory failure. In fact, a small amount of redundant structure might make all the difference between life and death. In those cases where the presence of an almost microscopic amount of vitality would carry the heart safely through the struggle or would carry the respiratory centre safely through the conflict and would prevent the patient's dying from exhaustion, some previous training of the respiratory muscles might turn the tide in favor of life. In a time of health we ought to be more careful to prepare ourselves for that conflict with disease through which most of us, sooner or later, are called upon to pass. It is scarcely necessary to say that the "hoary-headed" significance of a fine, crackling, inspiratory râle as a sign of a pneumonic process has long since become a thing of the past; we know that it points in many instances to a widely different condition of the air-cells.

Some of the mistakes in diagnosis which an intimate knowledge of the conditions under which this sign is produced may prevent are the following:

A history of pneumonia, which had occurred six months or a year ago, might lead to the error of regarding these râles as a sequel of the pneumonia. They might be looked upon as a sequel of old pleuritic adhesions. They might be thought to be caused by mitral incompetency or stenosis. Light bronchial hemorrhage of a harmless character might be mistaken for a pneumorrhagia, the râles being taken to indicate the area of hemorrhagic transudation. Strict attention, however, to the conditions which make them significant of the harmless phenomenon which we have just been discussing will help us to avoid all error in the matter.

We do not like to make mistakes if, by any means, we may avoid them. We like to feel that medicine is becoming more and more a science, and that we, as physicians, are becoming more and more scientific in the matter of obtaining results.

It is the earnest hope of the author that this article may be found helpful to the members of the profession.

CLINICAL LECTURES.

CYSTITIS.

LECTURE DELIVERED IN THE MEDICAL CLINIC OF THE BUFFALO GENERAL HOSPITAL.

BY PROFESSOR CHARLES G. STOCKTON.

GENTLEMEN,—The history of this patient is as follows: W. M., aged twenty-two, an American, a laborer by occupation, was admitted sixteen days ago. Family history good. Personal history good until two years ago, when he was troubled with frequent desire to micturate. No pain except when obliged to hold his water. Upon examination, the capacity of the bladder was found to be about sixty cubic centimetres. Urine in twenty-four hours seven hundred and sixty cubic centimetres, strongly alkaline and ammoniacal, urea fourteen grammes, no sugar, trace of albumen, large sediment of mucus, pus, bladder epithelium, and phosphates. The capacity of the bladder at present is two hundred and fifty cubic centimetres. The temperature for the first week ranged between 101° and 99° F., with a tendency downward. Now, a little more than two weeks after admission, both temperature and pulse stand at 100.

The history is a very typical one of a moderate chronic cystitis. The alkaline and ammoniacal urine indicates that there has been decomposition in the bladder, and an inflammation has undoubtedly been present to lead to the presence of pus and possibly of blood. If the man had suffered from urethritis which had extended upward into the bladder, it would be very easy to explain this condition, for many a cystitis has been caused in this way. Sometimes the inflammation may extend to the neck of the bladder and stop, at other times it may extend over the whole surface of the bladder or even follow up the ureters and reach the pelvis of the kidney, producing a pyelitis. It may also invade other organs which are genital rather than urinary and cause an epididymitis, sometimes associated with orchitis. The entire genito-urinary tract may thus be involved. Here we have neither the history nor the indications of gonorrhœa, and we must account for the cystitis in some other way. Cystitis often comes about from a combination of two factors: first, the irritation of the bladder from long retention of urine; second, either at the time or subsequently, a chemical condition of the urine which is itself irritating. The over-distention of the bladder with urine, involving a certain degree of paresis and disturbance of

circulation, often results in a congestion and a weeping of mucus into the bladder. The urine, being irritating, keeps up the over-supply of blood and the over-stimulation. The patient goes about his usual business; lifting, walking, and other motions jar the bladder and render it more sensitive; he is exposed to cold, and a man who has an irritated bladder is highly sensitive to cold; on account of the exposure, a cystitis develops in place of the congestion, and, by a continuance of these irritations, the cystitis may become chronic.

In this case we obtain no history of long retention. The patient says that the trouble has come on gradually, as it is apt to, when the cause is the irritating quality of the urine. You will ask me if cystitis can come about simply from the presence in the bladder of irritating urine? This alone is not likely to establish cystitis. But an exciting cause may be readily supplied, such as exposure to cold, a shock, a strain, or something else which would not be sufficient to produce cystitis without the predisposition caused by the condition of the urine. The state of the man's bladder is at present much better than when he entered the hospital. He passes water now about four times in the twenty-four hours and without burning or irritation. The urine is still highly alkaline. One would suppose from the history that the bladder contained only sixty cubic centimetres of fluid that it was thickened and contracted. A permanently small bladder is the frequent result of chronic cystitis. This is not the case here, however. The bladder has been washed out daily with a saturated solution of boric acid. The urine has been rendered less irritating by the administration of fluid extract of buchu in teaspoonful doses three times a day. The diet, also, has been of a bland character. My directions, in a general way, have been to render the urine neutral in reaction. If it is acid, the patient should have alkalies; if it is alkaline, he should be given some such preparation as benzoic acid. The urine should be tested at every passing to see that it is kept neutral but without crossing the line. The common mistake is made of not examining the urine frequently enough and of substituting a decided acid reaction for a decided alkaline reaction, or *vice versa*.

Whatever is taken into the body must come out in some way; salt, for example, if taken in large quantity, passes out with the urine. If we take into the stomach irritating substances which are eliminated by the kidneys, we must expect to produce an irritation of the bladder. So, too, if any disturbance occurs in the digestive tract, whereby irritating substances may be produced, these substances, passing out in the urine, may irritate not only the bladder but also the kidneys, the ureters, and the urethra. Thus, a chronic Bright's disease may be set up by the prolonged irritating quality of the urine produced by the state of the digestive tract. This relation of the stomach, intestine, and other digestive organs to the kidneys and the urinary passages should be thoroughly understood. It is the relation of the tract through which substances are taken in to the tract through which they are eliminated. It is important, therefore, in a case of this kind, to turn our

attention to the digestive canal. There are other symptoms in this patient which point towards the alimentary canal as a source of the trouble. This young man is anæmic. Whenever you are anæmic, the first thing you should think about, unless the patient has had a hemorrhage or has been starved, is toxæmia; for toxæmia leads to anæmia. Certain micro-organisms in the blood, such as the organism of malaria, of septicæmia, of typhoid fever, of scarlet fever, etc., by producing a toxæmia, lead to anæmia. It is not probable that these micro-organisms generally attack the blood-cells directly, although certain of them do, but the products of their growth, the ptomaines which they form, destroy the blood-corpuscles. Very similar to the ptomaines resulting from the multiplication of bacteria are certain toxic principles formed in imperfect digestion and called leucomaines (Bouchard and Schär), which enter the blood and act on the corpuscles in very much the same way as do the ptomaines.

To continue our investigation of the digestive symptoms which this man presents, we find that his tongue is covered with a coat which is thick and yellow in the middle and thinner at the edges. We may have a coated tongue without digestive trouble, and, on the other hand, we may have serious digestive trouble without any coating of the tongue. Therefore, when you see a clean tongue, do not neglect to examine further for symptoms of digestive disturbance. We must not forget to examine the teeth, and these we find in good condition. A casual inspection shows that the man is thin, and this points to digestive trouble. On percussion, I find that the liver and the stomach lie lower than they normally do. The stomach, I should say, is either displaced downward with all the other abdominal organs somewhat dependent, or else it is dilated. Those of you who are near by can hear a very marked succussion sound when I tap over the stomach with the fingers of one hand without interposing anything as a plexímeter. The percussion note changes a little below the umbilicus as I pass from stomach to intestine. Having the patient lie on his back, I ask him to "work his stomach up and down" by means of the abdominal muscles, and those of you who stand near him can hear distinctly the splashing of the contents of the stomach. With the ear, unaided by the stethoscope, I cannot tell just how far down this splashing or succussion sound is produced, but by using the stethoscope while an assistant suddenly strikes the stomach or while the patient himself draws in and then relaxes the abdominal wall, the range of the succussion sound can be accurately defined. About an inch below the umbilicus stomach resonance gives place to intestinal, but from the other test I know that the stomach goes lower, the gradual change from stomach to intestinal resonance being explained by the overlapping of the colon. From the examination thus far made, I should say that the stomach was dilated rather than depressed, for the succussion sound can with difficulty be obtained from the normal stomach. There are other ways of settling the question. I could administer a solution of soda and then one of tartaric acid, and the carbon dioxide gas evolved would

distend the stomach and mark its boundaries very plainly. But this test I do not wish to apply, as it would interfere with the examination of the gastric contents. I might insert a stomach-tube and pump the stomach full of air. This method, also, I shall not use. Another method is to empty the stomach by means of the tube and then introduce liquid, and either determine the area of the stomach by percussion or by forcing air through the tube beneath the level of the water and listening with a stethoscope to the bubbling of the air through the water. The space over which this sound can be heard affords an idea of the size of the stomach.

The ordinary depth to which the tube should be passed is twenty-two inches from the teeth. If the tube goes down below twenty-two inches, you may safely say that the stomach is dilated or displaced downward. In passing the tube the patient should sit straight without throwing the head back too far, for if the neck is bent backward the patient is sure to choke. The tube is then gradually passed into the stomach, the patient being directed to "swallow hard" whenever he gags. After some difficulty, by shaking and stripping the tube, the gastric contents have been removed undiluted for examination. Now, pouring in water and letting it flow out again, I find a good siphonage at twenty-two inches, and about the same at twenty-four, twenty-six, and twenty-seven inches. Now, filling the stomach fuller than before and siphoning out the fluid, I get what we have not seen before, little particles of meat which have evidently been lodged in the folds of the mucous membrane. The flow stops, but begins again when my assistant pushes the tube down to a depth of twenty-nine inches. We cannot completely drain a stomach by the siphon-tube. We are sure, however, that there have been four pints of water in the man's stomach, perhaps five pints. The weight of so much water—as many pounds—produces considerable discomfort, and unless we are acquainted with the patient and know from past experience the capacity and tolerance of his stomach, it would not be safe to put so much water into it at once. While an assistant has been pouring water into the tube, I have sought, with the stethoscope, the point of greatest intensity of the sound of flowing water, and I find it at a point nearly as low as the pubes. The opening in the tube is twenty-seven inches below the teeth. The condition of dilatation of the stomach is therefore thoroughly demonstrated. An examination of the gastric contents shows that digestion is practically completed, the stomach being nearly empty of food. The reaction is highly acid, but neither hydrochloric nor lactic acid is present, and it is safe to say that the dilatation is not of the type described by Germain Sée, associated with the production of an excess of hydrochloric acid. At 6.30 A.M., four hours ago, the patient had a breakfast of a chop, bread and butter, and milk. The fact that there is now no hydrochloric acid present does not prove that there has been none, for digestion has gone on very well, and, doubtless, the hydrochloric acid secretion has subsided.

BARBER'S ITCH.

CLINICAL LECTURE DELIVERED IN THE JEFFERSON COLLEGE HOSPITAL, JANUARY 6, 1896.

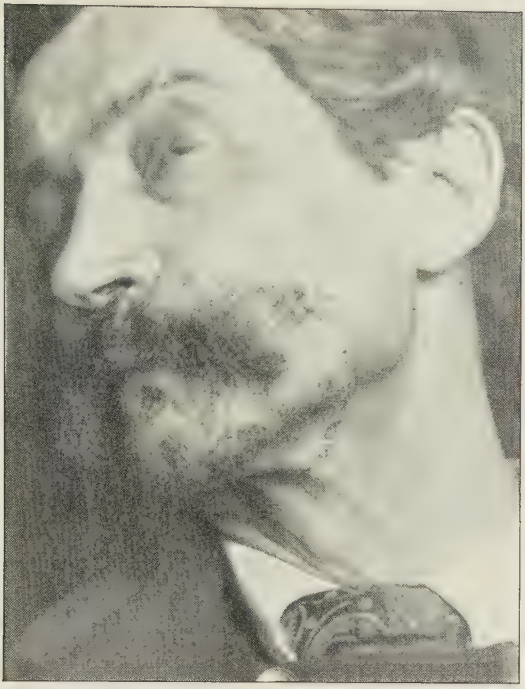
BY HENRY W. STELWAGON, M.D.,

Clinical Professor of Dermatology in the Jefferson Medical College, Philadelphia.

TRUE barber's itch, an example of which is shown in the patient now before you, is a disease of the bearded parts of the face, due to the invasion of the integument by the ringworm fungus. The disease has been, and is still, called variously parasitic sycosis, tinea sycosis, tinea trichophytina barbæ, tinea barbæ, trichophytosis barbæ, and ringworm of the beard. As it is due to the ringworm fungus, trichophyton, the proper technical term would seem to be either tinea trichophytina barbæ or trichophytosis barbæ. In connection with this case I desire to give you a brief description of the several stages or varieties observed upon this region, using a few photographs of cases which have been before you from time to time as illustrations.

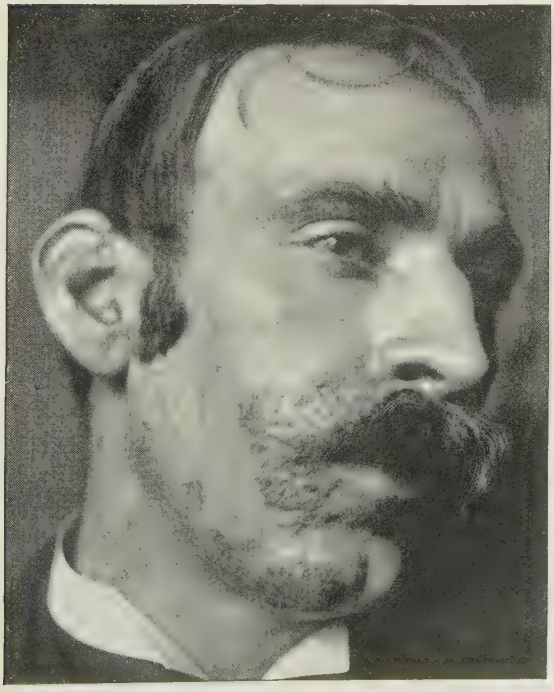
The disease most commonly begins as one or two simple patches of ringworm,—rounded areas with clearing centres and reddened, elevated, slightly scaly, papular, vesico-papular, or vesico-pustular periphery; generally the peripheral portion is merely reddened, elevated, and somewhat scaly. The disease may persist as such, the ring or rings enlarging, possibly one or more new areas arising, the older ones, at times, partly disappearing, while in some patches the infiltration and elevation at the borders become more marked. This constitutes the superficial variety of the disease. This type is not uncommon and may present one large ring-like patch, as seen in Fig. 1, or several or more variously sized ring-like areas or segments, some merely epidermic scaly rings, others more inflammatory and less superficial, the borders being quite pronounced, as portrayed in the photograph just shown. The borders may also show some pustulation. In these cases, if of considerable duration, the hairs are apt to present the same characters as in ringworm of the scalp, some falling out, others, invaded by the fungus, becoming brittle and breaking off, sometimes presenting brush-like ends. As a rule, however, the hair is never so conspicuously involved in ringworm of the bearded parts as in the scalp-disease. In other cases the ring or rings have scarcely time to form before the deeper tissue is involved, and then you see small areas of papulo-tubercles, at first grouped somewhat circularly, later becoming confluent, and sometimes diffused, as in the case before you. (This case is shown in Fig. 2.) In this patient on the chin and the right side of the lower jaw there are several

FIG. 1.



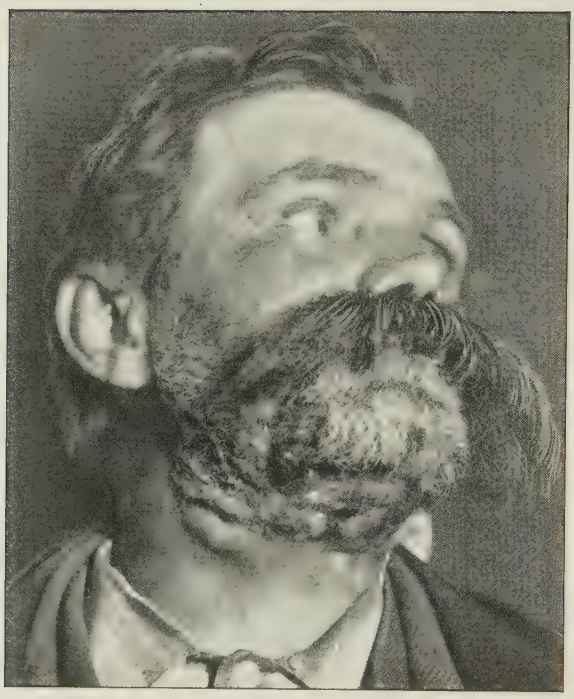
Barber's itch, superficial type.

FIG. 2.



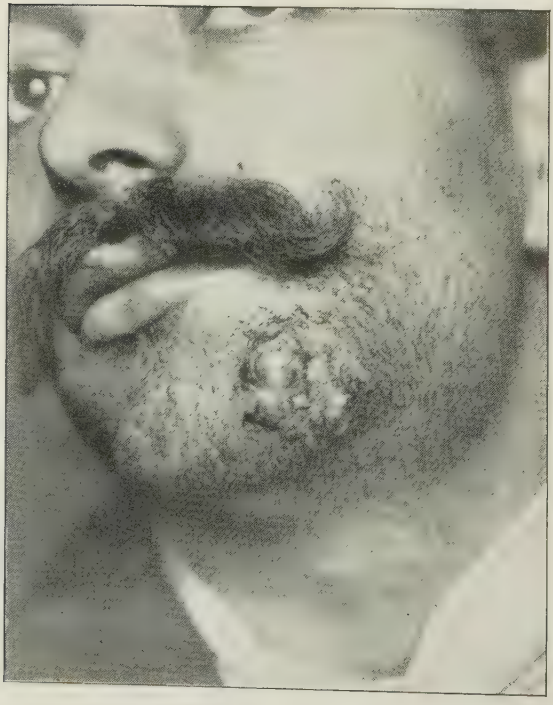
Barber's itch, medium type.

FIG. 3.



Barber's itch, classic nodular type.

FIG. 4.



Barber's itch, circumscribed nodular patch.

distinctly nodular, lumpy, deep-seated areas; those over the jaw still preserving, somewhat indistinctly, their ring-like shape. On the region around the right side of the mouth, invading the upper lip,—an unusual site,—the disease consists of a markedly infiltrated swollen area covered irregularly with pustules; on the other side of the chin are a few nodular infiltrations. The disease began three weeks ago. In other cases the usual beginning stages of the disease are soon lost or even wanting, it rapidly developing into one or several, small or large, sluggish or actively inflammatory, rounded or irregular areas made of deep-seated, distinctly lumpy or nodular masses, resembling somewhat flattened carbuncles; partly covered with pustules and partly showing a glairy mucoid or sero-purulent discharge from many of the follicular openings. The surface may become denuded here and there, and exhibit a tendency to papillomatous vegetations. In this form the hairs, as a rule, soon drop out. This nodular or lumpy type of the disease is the classic type, and is well shown in Fig. 3, the whole under part of the chin and hairy neck being the seat of lumpy, nodular infiltrations. The extent involved is here large; in exceptional cases the disease may consist simply of a single small area, from half an inch to an inch in diameter, and present the appearance of a carbuncle-like abscess, as shown in Fig. 4, a patient exhibited here last winter. I have known the disease in such cases as this last to be viewed as an ill-defined flat abscess or carbuncle, and treated accordingly till the error in diagnosis became self-evident.

The usual sites of trichophytosis barbæ are the chin, under the chin and jaws, the adjacent hairy neck, and the bearded sides of the face; the extent involved, as you have seen, varying considerably in different cases. The upper lip is rarely invaded, even when the disease is quite extensive; in this respect the patient before you is exceptional. Ordinary ringworm patches may coexist on other parts; for instance, as you see, this patient has a typical ringworm patch on the back of one hand; and I may add also that his wife has in the past week developed a patch on the cheek. The several varieties shown in these photographs represent the disease as commonly met with. Almost all the cases are mild and superficial at first; some remain so throughout, others advance slowly, others rapidly, into the true classic, deep-seated, or nodular form. Exceptionally, instead of beginning as one or more simple ringworm patches, ill-defined small areas of superficial or deep pustulation or follicular inflammation first appear, resembling folliculitis barbæ (sycosis vulgaris). Rarely it may begin as a few closely but irregularly grouped papulo-pustules or pustules.

The disease, as you know, is contagious, the trichophyton fungus being the infecting and contagious element. It is not uncommonly contracted in barbers' shops; hence the term "barber's itch." In the large proportion of cases the patient will state that the disease first appeared a few days after being shaved in a strange shop. In other instances it is contracted from a child or children of the family who may have ringworm of the

scalp or upon non-hairy parts; ringworm of the scalp, as our clinic shows, is not at all uncommon. In other cases it is contracted from the lower animals.

As a general rule, there should be but little difficulty in recognizing the disease. In the superficial form the ring-like character is usually diagnostic. This type should not, however, be confounded with the circinate and serpiginous syphiloderm; the latter is slow in its progress, the border more infiltrated and prominent, often showing ulceration, and the central or cleared-up part usually atrophic or scarred. In the deep-seated cases the peculiar lumpy or nodular infiltrated areas can scarcely be confused with any other disease. A single nodular tuberculo-pustular area resembling a carbuncle or flat abscess, already referred to, occurring on these parts should always be viewed with suspicion, and the probability of its being due to the ringworm fungus carefully considered. The history, the falling out of the hair, etc., are also important factors, and not infrequently a characteristic simple ringworm patch will be found to coexist upon non-hairy parts. In doubtful cases microscopic examinations of several hairs from the invaded areas should be resorted to. Simple sycosis (sycosis, sycosis vulgaris, coccogenic sycosis, folliculitis barbæ), with which ringworm sycosis is apt to be confounded, does not present itself in rings, is slower and more insidious in its progress, is usually diffused and superficial and less patchy; the upper lip is frequently involved, either alone or in conjunction with the disease on other bearded parts.

Fortunately, the disease, although often presenting active and repulsive symptoms, is usually rapidly amenable to treatment. All cases are curable, and only in the worst type and in long-neglected cases is there any conspicuous permanent hair loss or other disfigurement. A period of several weeks or several months is required to bring about a cure. After apparent cure a relapse should be guarded against by occasional remedial applications for a few weeks or a month subsequently. The affection being a distinctly local one, constitutional remedies are, as a rule, not prescribed; but in those cases in which the pus-formation is a conspicuous element cod-liver oil, the hypophosphites, or similar nutrient tonics seem to have a favorable influence. An essential part of the treatment should be depilation,—extraction of the hairs from the diseased areas,—especially in the deeper seated types. I am convinced that this procedure will shorten the period of treatment fully one-third and possibly one-half. On unaffected parts the beard should for obvious reasons be kept closely cut. Almost any of the so-called parasiticides will be found efficient, such as ointments of sulphur, of carbolic acid, of white precipitate, or citrine ointment, lotions of sulphur compounds, of mercurials, of carbolic acid, etc. The treatment here has gravitated to two plans, as being the most promising of rapid results,—one a sulphur treatment and the other a mercurial. Both are doubtless equally efficacious, but in some instances when progress is slow or unsatisfactory from one plan a change to the other is found to be of advantage. In the sulphur treatment a lotion of sodium

hyposulphite, one drachm to the ounce, and an ointment of precipitated sulphur of from ten to twenty per cent. strength, are conjointly prescribed. The mercurial plan consists in the use of a corrosive sublimate lotion, from half a grain to two grains to the ounce, together with the employment of an ointment of ten per cent. oleate of mercury, two or three drachms to the ounce of simple cerate, or simple cerate and lard, or, in place of the latter, a white precipitate or calomel ointment, from thirty to sixty grains to the ounce. The plan being selected, the method of carrying it out is as follows: The lotion is applied freely, being thoroughly dabbed over the affected areas and somewhat less liberally over the whole bearded region,—over the latter in order to prevent the infection of new areas; after the wash has dried, the ointment is to be well rubbed in, usually over the diseased places only, but, if there is a decided disposition towards spreading, the ointment as well as the lotion should be applied, once daily at least, to the entire bearded part of the face and neck. The applications should be made morning and evening, and in urgent cases three or four times daily. Before each reapplication the parts should be washed off with warm or hot water, with the use of soap when necessary. Treatment should be continued vigorously till all vestiges of the disease have disappeared, and then, as already stated, intermittently or less actively for several weeks. By this subsequent intermittent or less active treatment the possibility of relapse is reduced to a minimum.

REVIEW OF MEDICINE.

MEDICINE.

IN CHARGE OF JOHN H. MUSSER, M.D.,
Assistant Professor of Clinical Medicine in the University of Pennsylvania; Visiting Physician to the Presbyterian and Philadelphia Hospitals,

J. A. SCOTT, A.M., M.D., AND JOSEPH SAILER, M.D.,
Physician to the Out-Patient Department of the Pennsylvania Hospital, Associate in the Pepper Clinical Laboratory.

Special Test for Cancer of the Stomach. (*Medicine*, December, 1895.) By J. A. Wesener, M.D., of Chicago.

The author uses Boas's new method of estimating lactic acid both qualitatively and quantitatively, which depends upon the fact that when lactic or sarcolactic acid is treated with an oxidizing agent acetic aldehyde and formic acid are formed. The oxidation of the aldehyde to acetic acid can be prevented by boiling the solution very gently. The next step in the operation is to treat the aldehyde with iodine and potassium hydrate,

iodoform being produced. According to Boas, a definite quantity of acetic aldehyde will always give a constant weight of iodoform. The author has made this estimation and finds Boas's statement correct. He has also performed the same experiment with lactic acid to determine whether this, when oxidized to acetic aldehyde, would also give a constant weight of iodoform. His results prove that lactic acid can be estimated as acetic aldehyde. The organic products, for example, proteids, carbohydrates, and fatty acids, which, by forming acetic aldehyde, make a source of error in other tests, do not give acetic aldehyde under an energetic process of oxidation. By concentrating the solution upon a water-bath and boiling with barium carbonate the volatile substances are driven off. The lactate of barium is then decomposed with phosphoric acid and the liberated acid removed with anhydrous ether, separated, and evaporated. Both Boas and this writer find that in the normal stomach, and in cases of chronic gastritis, dilatation, atony, and atrophy, an appreciable quantity of lactic acid is not present. In three cases of suspected cancer Wesener found respectively 0.85, 0.75, and 0.13 per cent. of lactic acid. The diagnosis of cancer was confirmed by operation in one and by autopsy in the others. He believes it essential for the formation of lactic acid in the stomach to have some stenosis or other cause of stagnation which gives the lactic acid bacteria the proper medium in which to thrive.

Lateral Curvature of the Spine from the Physician's Point of View. (*Practitioner*, December, 1895.) By Frederic C. Coley, M.D.

The greater frequency of lateral curvature in females may be attributed in great part to muscular weakness produced by chlorosis, which is a very efficient predisposing cause, and to dress, an important factor which is often unnoticed by the physician. In a young girl the growth of the mammæ may make the bodice too tight across the chest long before the garment is worn out; and a kyphosis produced in this way is often perpetuated by fitting the dresses to the girl in her usual stooping attitude. Lateral curvature may be conveniently divided into three stages. In the first, the patient habitually assumes a faulty position, but is able to correct it completely by a voluntary effort; in the second, spontaneous correction by the patient is impossible, but the physician is able to remove the deformity by manipulation more or less forcible; in the third, no possible manipulation suffices entirely to correct the deformity. Four phenomena of lateral curvature—kyphosis, lordosis, lateral deviation, and rotation—are usually combined, though in very variable proportions. Lateral deviation and rotation are said to be always combined; but if this be strictly true, it is certain that they are combined in widely varying proportions in different cases. Sometimes there is marked lateral deviation, with hardly recognizable rotation; and sometimes the rotation is very obvious, while the spinous processes of the vertebræ do not deviate perceptibly from a straight line. The malpositions of the pelvis, due to structural defects, or merely

habitual, are the most important factors in the etiology of scoliosis. Of the structural changes, unilateral congenital dislocation of the hip is a rare one; sacro-iliac disease, recovered from in early life, occasionally produces puzzling deformities of the pelvis; flat-foot is apt to occur in patients predisposed to lateral curvature, and the arch of one foot may yield more than the other, producing what practically amounts to a slight difference in the length of the legs. These structural defects are, however, comparatively rare. Habitual pelvic obliquity due to almost constant use of the "stand at ease" position—*i.e.*, standing with one knee bent, while the other is straight—is a much more common condition. One leg becomes the favorite one for bearing the weight, and the bent limb becomes shortened. A scoliosis due to structural pelvic obliquity does not necessarily go on to the third stage, but a scoliosis due to an obliquity of the pelvis resulting from standing with one knee bent, often does advance to the third stage if not corrected in time. In the treatment, the first requisite will be to remove, if possible, any cause of general debility, especially chlorosis, which is extremely liable to relapse. Very careful and persevering training is necessary to teach the patient to avoid the trick of standing with one knee bent. None of the instruments in ordinary use will overcome the tendency to kyphosis so long as the patient retains the habit of carrying the head too far forward. In severe cases rest for an hour or two in the middle of the day, in the recumbent position, is necessary. The principle of treatment may be summarily stated thus: The patient is crooked; teach her to be straight; and do not stop until you are sure she has learned the lesson. To carry this principle out successfully requires no little care and experience. Moreover, it must be admitted that some patients will not take the trouble to learn.

A Case of Skin-Diphtheria. (*Berliner klinische Wochenschrift*, October 28, 1895.) By Max Müller, M.D.

This rare condition occurred in a child, two and a half years old, who had been burned with hot water on the right side of the face, the neck, the chest, and the abdomen as far as the umbilicus. The burned area healed quite rapidly, and the dressings were removed at the end of one week. At the time that the bandages were taken off the mother of the child playfully kissed it on the neck. On the next day the mother sickened with diphtheria, and a day or two later the aunt, sister, and father were ill with the disease. On the third day, the tender skin on the neck of the child, which had been touched by the mother's lips, showed a white, swollen spot about four centimetres in diameter, bordered by intensely red streaks and surrounded by an œdematous area which soon spread as far as the right eye. Two injections of serum No. 0 were given. The skin soon healed, and the child remained free from infection of the throat. This case has several interesting features. The source of infection is positively known and the incubation period can be accurately estimated.

The Visceral Complications of Erythema Exudativum Multiforme. (*American Journal of the Medical Sciences*, December, 1895.) By William Osler, M.D., of Baltimore.

From a detailed report of eleven cases observed by this writer, and from a collection of fifty more gathered from the literature of this subject, the following manifestations of exudative erythema are cited. The skin lesions were polymorphic, ranging from simple purpura to extensive local œdema, and from urticaria in all grades and forms to large infiltrating hemorrhages of the skin and subcutaneous tissues. In individual cases the cutaneous eruptions were often of the most varied character. Of the visceral manifestations, by far the most common are the gastro-intestinal crises, which consist of simple colic of all grades of intensity, vomiting, and diarrhœa. These symptoms were present in each of the cases reported. Nephritis is the most serious complication. It was found in five of the writer's cases, two being followed by general anasarca and death. In the total number (sixty-one) there were fourteen cases, of which four died. In the mildest grade there is only a trace of albumin with a few tube-casts, while the aggravated cases present all the symptoms of acute hemorrhagic nephritis. In rare instances the nephritis becomes chronic. Hemorrhages from the various mucous membranes were present in five cases of the series. Hæmaturia was present in three cases; hemorrhage occurred from the bowel in three cases, from the stomach in two cases, from the lungs in two cases, from the nose in three cases. One patient had spongy and bleeding gums. Hemorrhage from the bowels is the most common, and occurred in thirty-nine of the total sixty-one cases. Cardiac complications were not present in the cases detailed. In one case there was a heart murmur which quickly disappeared. Endocarditis occurred in two cases in the total series. Pericarditis occurred in three cases. The respiratory organs are less frequently involved. In one of the writer's cases there were recurring attacks of cough and bronchitis without fever. In another pneumonia followed the disease and proved fatal. Perhaps the most extraordinary and distressing feature of the disease is the tendency to recur, which is so noticeable in all types of exudative erythema. In only one case of the eleven reported was the attack single. In the others there were multiple outbreaks distributed over periods ranging from two months to eight years. Arthritis was present in five cases of the series, and in thirty-two of the collected cases. The chief part of the swelling is often due to effusion in the tendon sheaths about the joints.

Diseases of the Mouth, Nose, and Throat as Etiological Factors in Chronic Glandular Gastritis. (*New York Medical Journal*, November 23, 1895.) By Fenton B. Turck, M.D.

This author has made investigations concerning the relation between chronic naso-pharyngitis and chronic glandular gastritis. He uses the gyromele for obtaining cultures from the different areas of the nasal cavity

and from the stomach. This instrument consists of a cable to which is attached a sponge encased in a sheath, which is exposed when it reaches the desired part, and revolutions produced which remove material from the walls. He finds a marked difference in the number and appearance of micro-organisms found in the anterior nares, the nasal chamber, and the post-nasal cavity. In the anterior nares the germs were not found in colonies, but seemed to be simply arrested at that point. In the nasal chamber but few germs were found, while in the post-nasal cavity, where chronic inflammations existed, almost pure cultures were found.

Conclusions: First, clinical observation in many cases indicates a marked relation between diseases of the mouth and post-nasal cavity and chronic inflammation of the stomach and intestines; second, the invasion of the stomach from the infected mouth and pharynx is supported by the fact that many of the known pathogenic micro-organisms present the same biological and morphological forms in cases of gastritis as the micro-organisms found in diseases of the mouths and post-nasal cavities of the same patients.

The Relation between the Specific Gravity of the Blood and its Hæmoglobin Percentage. (*Medical News*, December 21, 1895.) By F. C. Bush, B.S., and A. T. Kerr, Jr., B.S., under the direction of Herbert U. Williams, M.D., of Buffalo.

After extended observations on the relation of the percentage of hæmoglobin in the blood to its specific gravity, these authors conclude, first, that the percentage of hæmoglobin in blood, in most cases, may be predicted from the specific gravity with sufficient accuracy to be valuable for clinical purposes; second, Fleischl's hæmometer is liable to an error of ten per cent.; third, Gowers's instrument is liable to an error even greater than that of Fleischl's; fourth, that the error in technique with the specific gravity method is likely to be very slight; fifth, in following up a case with Fleischl's or Gowers's instrument, very erroneous conclusions may be drawn. Mistakes may be made of five per cent. or ten per cent. too low one day, and five per cent. or ten per cent. too high on another day; sixth, in following up a case the specific gravity estimation seems to give very slight error, and even if from it the absolute percentage of hæmoglobin could not be determined, yet the relative increase or decrease of hæmoglobin from one day to another might be quite accurately estimated; seventh, because of its being based on the instrument of Fleischl, Hammerschlag's table is, of necessity, only approximately correct.

The Importance of Frequent Observations of Temperature in the Diagnosis of Chronic Tuberculosis. (*Boston Medical and Surgical Journal*, December 19, 1895.) By Walter Channing, M.D.

The writer reports an interesting case of chronic tuberculosis for the purpose of calling attention to the importance of making careful observations of temperature as an aid to diagnosis in obscure forms of disease

with an absence of marked physical symptoms. The patient, a woman, thirty-nine years of age, had suffered with chronic melancholia, accompanied by periods of violent insanity for two and a half years, previous to the time of her entrance into the hospital. She was then very languid and listless, showing loss of mental vigor and an undue degree of depression and diminished power of perception of her condition and surroundings. An attack of diarrhœa with fluctuating temperature lasted for some weeks. A tumor, apparently ovarian, was found on the left of the uterus and was firmly held in place by inflammatory adhesions. The most striking datum from the start was the persistent continuance of an elevation of the temperature, not day by day reaching regularly a certain maximum height, but while usually at night considerably above normal, tending at short and irregular intervals to rise much higher. The temperature was recorded for a period of nearly two years and three months, being taken in the mouth and always by a physician. The total number of observations amounted to fifteen hundred and eighty-two; four hundred and nine times there was a rise to between 100° and 102° F.; eighty-seven times there was a rise to between 102° and 105° F.; thirty-two of these times 102° F. was the point reached; twice 105° F. and several times 104.4° F. was reached. When there was no excessive rise for some time the daily fluctuations would be greater. Chronic tuberculosis was the only diagnosis which could account for the symptoms. The anatomical diagnosis was: Tuberculosis of the ovaries and tubes, with formation of pelvic abscess with perforation into the rectum. Tuberculosis of mesenteric glands and liver. Chronic peritonitis with adhesions. Chronic passive congestion and ascites, probably due to compression of vessels by peritoneal adhesions. Anæmia; marasmus. The characteristic temperature-curve of chronic tuberculosis could be charted by careful observations in a considerable number of cases. The following points gathered from the case cited are significant: 1, an average considerably above normal; 2, an almost invariable rise at night; 3, periodicity of a maximum elevation of several degrees, occurring at irregular intervals of a few days; 4, gradual ascent to the maximum for two or three days, with a decline sometimes gradual, sometimes sudden; the ascent at night, the decline in the morning; 5, protracted continuance of a high temperature for months and years; 6, less constitutional reaction from the periodical rises of several degrees than would be expected.

The Heart in Anæmia. (*Medical News*, December 7, 1895.) By Delancey Rochester, M.D.

The symptoms of anæmia that may be referred directly to the heart as their source are shortness of breath, palpitation, and pain in the præcordial region upon physical exertion or emotional excitement. Physical examination reveals a marked pulsation in the epigastrium and præcordia, the apex-beat is generally in its normal position, or a little below and to the left; the area of cardiac dulness is normal, or slightly increased; the first sound

is short in duration, or may be entirely replaced by a soft, blowing murmur; the second sound is sharp and valvular in quality. Different competent observers have located the cardiac murmur of anæmia at the aortic, the pulmonary, the mitral, and the tricuspid areas. Balfour, of Edinburgh, places the point of greatest intensity one inch and a half, or rather more, to the left of the pulmonary area, and over the part where the appendix of the auricle pops up from behind, just to the left of the pulmonary artery. Hanford has observed that the murmur is usually of greater intensity when the patient lies flat on the back. Most observers agree that the anæmic heart-murmur is systolic in time and basic in situation. The morbid conditions found in the heart in anæmia vary according to the degree and character of the disease, but may be summed up as follows: Laxness and flaccidity of the myocardium with some dilatation of the cavities and some hypertrophy of the left ventricle; fatty degeneration varying from a mild degree of degeneration of some of the fibres of the musculi papillares, to the severe grade seen in progressive pernicious anæmia. The mechanism of the anæmic murmurs is an interesting and contested point; an explanation of the mode of production applicable to all cases, and which also holds in the case of organic murmurs, is: an obstruction to the onflow of the blood, which is sent through a constricted opening into a larger space beyond, and sounds produced which depend upon the vibrations of, what have been termed by Savant, fluid veins. These sonorous vibrations are transmitted to the surrounding blood, to the vessel walls, and thence to the ear of the listener. At the aortic and pulmonary orifices the blood, in health, is driven with enough velocity against the semilunar valves to press them flat against the walls of the artery; but in anæmia the blood is reduced in weight and allows the valves to hang out into the lumen of the vessel, thus producing the necessary condition and consequent sonorous vibrations resulting in murmur. A rational method of explaining the murmurs heard at the mitral and tricuspid areas was long ago brought forward by Wake, of Dublin. By fatty degeneration, the musculi papillares were weakened to such an extent as to allow the auriculo-ventricular valves to yield to the pressure of the blood during the ventricular systole, and permit regurgitation to take place. The mitral regurgitant murmur is heard with great distinctness in the area described by Balfour, and for this reason he concludes that the heart-murmur of anæmia is one of mitral regurgitation. The arterial murmur heard in the carotids is synchronous with the cardiac systole, and is a transmission along the current of blood of the cardiac murmur arising at the aortic orifice. The venous murmur, on the contrary, must originate in the vein itself, and here a cause is found for it. The external jugular vein is attached to the clavicle, and its lower part kept constantly extended; just above this somewhat enlarged chamber of the vein is a pair of valves. Owing to the relaxed condition of the walls of the vein in anæmic individuals, and the lack of weight of blood necessary to keep them in place, it is highly probable that these valves hang out into

the lumen of the vessel and produce the necessary obstruction for the formation of the fluid veins of Savant.

Simultaneous Double Aneurism of the Superficial Femoral on the same Side. (*New York Medical Journal*, November 2, 1895.) By Edmond Souchon, M.D., of New Orleans.

The writer reports this case as the first and only one on record of a simultaneous double aneurism of the superficial femoral on the same side cured by ligation alone. It stands the only case of double aneurism of the superficial femoral alone ever cured by any operative measure. The patient, a man, aged forty-three, presented, on admission to the Charity Hospital, an aneurism of the size of a cocoanut, situated at the opening of the great adductor of the left thigh, and another the size of a hen's egg in Scarpa's triangle. All the signs of aneurism and of serious pressure were present. Treatment by elevation of leg, by digital compression, by application of the Esmarch bandage, and by a compress was without effect. The lower tumor grew so rapidly that rupture was imminent, and immediate action was necessary. Ligation of the superficial femoral was decided upon and performed at an equidistance between the origin of the deep femoral and the upper aneurism, a double continuous kangaroo ligature being applied without rupturing the coats of the vessel. Four days after the operation the upper aneurism was found to be pulsating as steadily as ever, and a few days later suppuration of the operative wound took place, followed by hemorrhage. A ligature was then applied to the bleeding upper end of the vessel, which stopped the pulsation again; but it soon returned, accompanied by another hemorrhage. Both ends of the vessel were then ligated and the pulsation ceased. The large, lower aneurism shrank rapidly to about one-third of its original size, and then remained persistent until it was incised, a mass of clots removed, and the cavity drained. The patient became infected with erysipelas somewhat later, but finally recovered. The author concludes from this case: 1. That it is not wise to apply compression over the superficial femoral in cases of tumor of a certain size which may take on rapid growth and force operation through bruised tissues. 2. The ligature should be applied as close to the sac as possible, so as to shut out the collateral branches which cause the return of the pulsation to the upper tumor. 3. Should this operation fail, extirpation of the sac is the next operation in order.

COLUM. MEDICAL LIBRARY JUN 27 1899

Sixteen cases of double aneurism on the same side have been tabulated by the author. Of these cases eight were cured, one was partially cured, and seven died. Of eight cases of double aneurism of the common femoral and superficial femoral of the same side, or of the common femoral and popliteal of the same side, four were cured by ligation of the external iliac; but in two cases of double aneurism of the superficial femoral and of the superficial femoral and popliteal, it was ligated, and both patients died. The author thinks that the good results following ligature of the

common femoral are due to the fact that an aneurism of the common femoral, by hindering the free circulation of the blood, develops a collateral circulation with the deep femoral through the sciatic and obturator arteries, so that when the external iliac is ligated the parts are more quickly supplied with blood than when it is ligated for aneurism in the course of the superficial femoral.

THERAPEUTICS.

IN CHARGE OF ALEXANDER D. BLACKADER, B.A., M.D.,
Professor of Therapeutics, McGill University, Montreal, Canada,
ASSISTED BY
D. J. EVANS, M.D.

Creosote Carbonate in the Treatment of Pulmonary Tuberculosis. (*The Medical News*, December 14, 1895.) By William H. Dukeman, M.D., of Los Angeles.

Creosote carbonate is a non-poisonous and non-irritant preparation of creosote which is completely assimilated, and is capable of being given in doses sufficiently large to produce a general systemic effect with no evil drawbacks. It contains ninety-two per cent. of the purest beechwood creosote chemically combined with eight per cent. of carbon dioxide. The best mode of administering the drug is to drop it into the well-beaten yolk of an egg, which is taken after each meal and before retiring at night. Commence with five-drop doses and add one drop a dose each day until the patient notices a marked improvement. This dose is used for a week or two, and then again increased a drop a day for a week, or until marked signs of improvement again show themselves. Forty-drop doses are as large as have been found necessary. The cases treated were selected, none being in the far-advanced stage of the disease, but showing well-marked objective and subjective symptoms. A careful, systematic trial has been given in each case, every other detail in the treatment as to diet and hygiene being also thoroughly considered. The personal habits of every patient were investigated and all faults corrected. These patients were sent to this climate for their health, and although this factor is no doubt a helpful agent in the treatment of patients with pulmonary tuberculosis in its earlier stages, those under treatment with creosote carbonate show greater gain, of a more strengthening character and of a more permanent nature than those under any other treatment.

The Cigarette Habit. (*New York Medical Journal*, November 30, 1895.) By J. Mulhall, M.D., of St. Louis.

Cigarette-smokers may be divided into those who inhale and those who do not. All real devotees of the cigarette inhale. By a quick respiratory act the smoke is drawn through the larynx into the trachea and into the

first division of the bronchial tubes, but not into the lungs proper. The fact that there is a tidal and a residual air indicates that the smoke does not reach beyond the bronchial tubes. The pleasure in cigarette-smoking, as compared with other tobacco habits, may be said to be a pleasurable irritation of the laryngeal and tracheal sensory branches of the pneumogastric nerve. One absorbs nicotine in accordance with the amount of absorbent surface in contact with the column of smoke. When the smoke-chamber includes the larynx, the trachea, and larger bronchi, there is about three times as much surface for its absorption as when the mouth alone comes in contact with the smoke, and although the cigar contains vastly more nicotine, the cigarette, by inhalation of smoke and by much more frequent use, giving the powerful effect of oft-repeated small doses, is much more dangerous than the cigar or the pipe. The evil effects of cigarette-smoking may be divided into local and constitutional. The constitutional effects are absolutely the same as those of tobacco in any other form. The symptoms are those of nicotine-poisoning. Dr. Ledaux, who analyzed several brands of cigarettes, found no other drug but nicotine in the tobacco, and in the paper a harmless quantity of cellulose. Nicotine is productive of great harm in youth, especially before puberty, when the tender nervous organism is growing. The cigarette presents to the young the greatest encouragement to the use of tobacco, because it does not induce nausea, as only a minute quantity of nicotine is absorbed unless the smoke is inhaled; and nicotine tolerance is usually acquired before inhalation is begun. For the same reason it is used among young women, who, as a rule, do not inhale. The great evil of tobacco is its constitutional effect on the nervous system; the much lesser evil is its local effect on the upper respiratory system. Excluding all other causes and looking at tobacco purely in respect of its local effect, the author denies that it ever causes, as ordinarily used, throat diseases worthy of the name. A trivial hyperæmia and secretion may be caused. The cigarette habit is growing enormously. Nervous diseases and insanity are rapidly increasing among American people. If to such an inheritance American youth adds the nerve-destroying nicotine habit, which the cigarette so materially assists in spreading, there is great reason to hope that the cry of reform may be echoed and re-echoed throughout our glorious country.

The Treatment of Grave Cases of Asphyxia in the Course of General Anæsthesia by Tracheotomy and direct Insufflation. (*Gazette des Hôpitaux*, October 1, 1895.) By Paul Thiéry, M.D.

The author has called attention to this subject in two former articles, in one of which the details of the operation are given. He has treated four cases successfully and two which resulted in failure. This measure has been used only as a last resort, the two fatal cases mentioned being to all appearances dead, the heart-beat having ceased twenty and thirty-two minutes respectively before tracheotomy was attempted. The procedure

might be much more successful if applied quickly, and with decision and coolness. An interesting case, his last successful one, is cited, in which there was a double cause for the asphyxia, œdema of the glottis and chloroform anæsthesia. At the beginning of the inhalation of chloroform the patient had spasm of the glottis and asphyxia with extreme cyanosis rapidly developed. Rhythmic tractions of the tongue were without effect. The extremities grew cold and assumed a cadaverous aspect and all signs of life seemed lost. Tracheotomy was performed and insufflation carried on for four minutes when the integument of the face became slightly tinted, and after ten minutes the respiration became spontaneous. The author concludes that this method should be chosen in all grave accidents from asphyxia, but particularly if due to chloroform anæsthesia. The insufflation should be persevered in; two cases were successful after more than an hour's insufflation. The condition of the pupil is, as in chloroform anæsthesia, the best index to guide the physician. If the pupils are contracted, there is hope of return of life; if they are uniformly dilated, success is possible but not probable.

Conclusions regarding the Effort to use Serumtherapy for Syphilis and Practical Propositions for the Same. (*Wiener medicinische Blätter*, 1895, No. 11.) By E. Spiegler.

The writer gives a critical review of the researches made hitherto on this subject, and himself makes the proposition to inoculate persons in the incubation period of syphilis with blood-serum from individuals suffering with the gummata of an old syphilis. The blood of these patients usually holds enough protective material to shield one from a new syphilitic infection. The placental blood from cases with appearances of tertiary syphilis would also be a proper inoculating material.—*Centralblatt für die medicinischen Wissenschaften.*

SURGERY.

IN CHARGE OF HENRY R. WHARTON, M.D.,

Demonstrator of Surgery and Lecturer on Surgical Diseases of Children in the University of Pennsylvania; Surgeon to the Presbyterian Hospital, the Methodist Episcopal Hospital, and the Children's Hospital; Consulting Surgeon to the Presbyterian Orphanage,

JOSEPH P. TUNIS, A.B., M.D., Assistant Demonstrator of Surgery in the University of Pennsylvania, AND J. P. ARNOLD, M.D., Medical Superintendent of the Presbyterian Hospital.

Chylothorax and Chylopericardium. (*Deutsches Archiv für klinische Medicin*, vol. liv., Nos. 4 and 5, 1895.) By Arnold Bargebuhr, M.D., of Hamburg.

The writer has collected twenty-two cases of chylothorax, in which five cases were due to the rupture of the thoracic duct. The etiological factors

were gun-shot wound, one; compression of the thoracic ducts by tumors, one; violence, four; parasites, one; thrombosis of the left subclavian vein, three; non-tuberculous peritonitis, one; sclerosis of the lymphatics, one; carcinoma, four, and one doubtful case; violent exertion, one; thrombosis of the thoracic duct, one; malignant lymphoma, one; and unknown, two. The prognosis is unfavorable, seventeen dying, four being cured, and one unimproved. In ten cases tapping was employed, in one of the patients this being done over ten times. Unless there are marked pressure symptoms this procedure is not advised, as a large amount of nourishment is taken away from the body. The only case of pure chylopericardium is the one put on record by Hasebrock, though in a case of chylothorax described by Fränkel about one-half litre of chylous fluid was found in the pericardium, in addition to that present in the pleural cavity.

The Temperature Curve in Phlegmons. (*Gazette des Hôpitaux*, September 26, 1895.) By R. de Bovis, M.D.

The author divides the curve in phlegmons into three periods: 1. Period of onset. The rise of temperature at this period is well known, and consists of an abrupt or progressive elevation of temperature according to the mode of infection, and rising to 38° C. or 40° C., or even much higher.

2. Period of stadium, fever of inoculation. In this, the pus-forming period, there are oscillations of temperature varying from one to five degrees according to the intensity of the intoxication, the nature and extent of the suppuration, and the time and mode of surgical intervention. An abrupt cessation of general and febrile symptoms is often brought about by the evacuation of pus, and the rapidity of the defervescence may resemble that of pneumonia. In the more serious cases of diffuse phlegmon the temperature generally rises in the evening, or the day following surgical interference. According to the studies of Berneuil and Manoury, this rise is considered as due to the extension of the infectious agent by the dividing of lymphatic vessels and veins during the operation. This fever is called the fever of inoculation.

3. Period of decline, fever of resolution. Usually the temperature falls uniformly and tolerably quickly. Sometimes, however, several abrupt exacerbations take place and the temperature follows an "acute form." In a second class a subacute form is seen, in which there are no chills nor great oscillations of temperature, but a simple exacerbation more or less accentuated, which occurs, perhaps, in the course of one day, or occupying several days for its completion.

Conclusions: 1. Surgical operations on suppurating foci are sometimes followed by a rise of temperature, produced by inoculation of the infection (fever of inoculation).

2. The return of the temperature to the normal is often interrupted by a rise more or less intense, the fever of resolution, caused by the absorption

of the exudate from the cellular tissues, and to this fever a favorable significance is given.

3. These different phenomena are observed in phlegmons of a certain extent or diffuse.

The Influence of Moisture, Warmth, and Antiseptic Dressings in the Treatment of Infected Wounds. (*Deutsche Zeitschrift für Chirurgie*, vol. xli., Nos. 1–3, 1895.) By C. Steinmetz, M.D.

This author was led by his clinical observation of the results obtained in treating infected wounds by antiseptic dressings, and by moist dressings with mild antiseptics, to believe that the moisture and heat produced the favorable results, and that the antiseptic possibly if too strong produced harmful results. The fact is well known that antiseptics, used in sufficient strength to destroy bacteria, are injurious to tissue cells and delay union, and any antiseptic dressing must be changed daily in order to prevent the collection of pus. His study in experiments on dogs, in which wounds were infected by staphylococci, showed that there is no beneficial action from heat and moisture; on the other hand, the action is rather harmful, since a suppurative process, when left to itself and protected from external or mixed infection, has a tendency to become localized, to spread less markedly, and to heal of itself. Under the influence of heat and moisture it spreads itself out and takes on a more virulent character (necrosis). Its action, however, upon healthy tissue is not harmful, and does not produce a tendency to suppuration in the tissues. In infected tissues they, however, act harmfully, producing a spreading of the inflammatory and suppurative processes. The action of dressings cannot be studied when there is a daily changing of them.

The Production of Organic Heart Lesions by Contusions of the Heart. (*Deutsche Zeitschrift für Chirurgie*, vol. xli., Nos. 4 and 5, 1895.) By L. Heidenhain, M.D.

This author, after reporting a very interesting case and a careful study of the literature of the subject and cases previously reported, comes to the following conclusions:

1. Anatomical observations have shown that, in rare cases, the action of a contusing external force, without the presence of a wound or even of a fracture of a rib, may produce a slight contusion of the myocardium, which may continue as a recognizable lesion through life. It is presumable that, as the result of such a contusion, a person surviving the shock may have an insufficiency of the heart produced. (Hockhaus.)

2. As the result of external contusion a rupture of the valves of the left side of the heart may be produced, as has been shown by anatomical and certain clinical evidence, and also by observation on the cadaver. (Barié.) Such an occurrence has not been observed in the right heart.

3. The rupture due to external violence is to be distinguished from

those ruptures due to excessive pressure within the heart which may occur in both sides of the heart from an increase of blood pressure due to great physical exertion.

4. Rupture of the valves can of itself produce only a valvular insufficiency. This is substantiated by the fact that in the great majority of observations made up to this time of rupture of the valves, either from internal or external violence, only an inability to close the valves completely has been established either clinically or anatomically.

5. A rare form, in which a stenosis of the valves followed a contusion in the cardiac region, can be explained only by supposing that there was a subsequent inflammatory alteration of the valves. The observations already made permit the supposition that in such cases we have a chronic endocarditis.

Concerning Fat Emboli. (*Revue de Chirurgie,* No. 7, 1895.) By Guillaume de Groubé, of Charkoff, Russia.

This author reports a very interesting case of death due to fat embolism in a patient who had sustained the following injuries: Contusion of the head and face accompanied by a slight amount of cerebral disturbance; comminuted fracture of the clavicle with slight contusion of the pleura and lung, transverse fracture of the sixth and seventh ribs of the left side; oblique fracture of the left tibia; and contusions in various parts with ecchymoses and superficial abrasions. From his personal observation of this case and a careful study of the literature on this subject, the author would draw the following conclusions:

1. Although fatal cases of fatty cerebral embolism are very rare, the danger and possibility of its occurrence should never be lost sight of in cases where there is great comminution of bones or destruction of tissues. This is the only case the author has seen in a wide experience extending over twenty-nine years among grave injuries, and the only patient whom he has lost from this cause, and he does not wish to draw conclusions from this one case.

2. In all cases of extensive injury he advises the examination of the urine for fat every day for three weeks.

3. This determination of the quantity of fat in the urine will give a relative calculation of the amount still remaining in the system: the more that is excreted the less remains behind. A diminution in the amount of fat in the urine accompanied by an increased pulmonary difficulty is an indication of the approach of danger.

4. Difficulty of respiration and lowered temperature are signs which should call attention to the case and put one on guard.

5. The symptomatology of fat emboli and the method of their origin indicate complete rest with fixation of the limb as the best treatment. In compound fractures the dressings should not be changed any more frequently than is positively necessary.

6. Massage should never be employed in recent cases, and in the later stages only when a mass of extravasated blood will not become resorbed.

7. Frequently large sacs filled with blood and liquid fat are caused by contusions. Such sacs should be opened and dressed aseptically; the relief of the tension decreases the danger of embolism and hastens recovery. The same principle is applicable to excisions, and drainage should be allowed for in all such cases, as embolism has followed hermetical occlusion.

8. The danger of fat embolism should weigh in favor of amputation where there is doubt.

9. The excretion of the fat by the kidneys and the action of the heart should be helped by the use of cardiac stimulants and diuretics, especially digitalis.

Juxta-Articular Osteo-Tuberculosis. (*Revue de Orthopédie*, September, 1895.) By Dr. V. Menard.

Although the great majority of the lesions of tuberculous ostitis are those which involve the joint, this author calls attention to the fact that there are many that originate in the extremities of the long bones just outside of the joints, and, if operated upon at a sufficiently early date, do not lead to articular lesions.

He illustrates his subject by the detailed report of ten interesting cases. In regard to the treatment of these foci, they should, in the first place, be recognized early and then subjected to early and thorough operation, since any delay may result in the invasion of the neighboring articulation and destruction of the joint.

If tuberculous arthritis has its seat of origin in the neighboring bones, the greater frequency of tuberculous disease of the hip-joint over that of the other joints of the body is to be explained by the anatomical construction of the part, the neck of the femur lying entirely within the capsular ligament.

The recognition of the presence of such a focus outside the joint at an early day is very important, as if operated upon it will not involve the neighboring joint, whereas, if allowed to remain, it is first detected as a tuberculous arthritis when the joint has already been invaded and partially destroyed.

Hypertrophy of the Prostate; Complete Retention; Double Castration; Cure. (*Annales des Maladies des Organs Genito-Urinaire*, No. 8, 1895.) By Dr. J. Albanan, of Paris.

The author reports an interesting and successful case of double castration for the relief of the hypertrophied prostate in a patient sixty-nine years of age, who for six months had been unable to pass his urine without a catheter and whose testicles showed no trace of utility.

The condition before operation was as follows. The patient had had complete retention on several occasions, at one time requiring two hypo-

gastric tappings. The symptoms of increased frequency and retention had been steadily progressive. Examination showed some slight constrictions of the penile urethra, with a history of four attacks of gonorrhœa, while the prostatic portion was elongated. The bladder was not sensitive either when distended to the umbilicus or on contact. Rectal palpation, when the bladder was empty, showed a prostate moderately enlarged, smooth, without irregularities, and yielding to pressure. A soft catheter would not enter the bladder. The urine was turbid, with a small purulent sediment, but there were no tube-casts.

Palpation of the kidney disclosed nothing. The general condition of the patient was mediocre, he had no fever, but a dry tongue and loss of appetite. Antiseptic lavage of the bladder for ten days produced no marked results.

He accepted double castration, which was performed on the 26th of June; the wounds healed by primary union.

The patient urinated spontaneously twenty grammes the afternoon after the operation. Two hundred grammes the next day, four hundred, six hundred, and finally, on the seventh day, fifteen hundred grammes. The residual urine on the eighth day was three hundred grammes, on the eleventh one hundred and eighty, and from the thirteenth to twenty-first one hundred and thirty-five to one hundred and fifty grammes. On the twenty-fourth day it fell to twenty-five, and thereafter varied between sixteen and twenty grammes.

The patient left the hospital on the 26th of July; he was urinating five to six times a day and once at night. There was found to be less than fifteen grammes of residual urine on that day. Rectal examination showed that the prostate had decreased about one-fifth in size. A soft catheter could be easily passed.

On the Influence of Ether and Chloroform upon the Kidney. (*Deutsche Zeitschrift für Chirurgie*, vol. xl., Nos. 5 and 6, 1895.) By D. N. Eisendrath, M.D., of Chicago.

By a careful chemical and microscopic examination of the urine prior to and subsequent to narcosis by ether and chloroform, the author has studied, in one hundred and thirty cases, the relative action of the two anæsthetics upon the kidney, as evidenced by the alteration in the constituents of the urine and their relative amounts before and after narcosis.

He summarizes his study in the following conclusions:

1. Albuminuria that already exists is more frequently increased in amount by ether than by chloroform.

2. Albuminuria follows chloroform narcosis more frequently than ether narcosis; the proportion being thirty-two to twenty-five.

3. On the amyloid kidney their action is similar.

4. Tube-casts either accompanied by or without albumin follow the use of both drugs with equal frequency, but albumin disappears more rapidly

after ether narcosis. This late action has been proven to be more harmful in the case of chloroform than in that of ether.

The author details an interesting case of necrosis of the parenchyma following chloroform narcosis.

Gastrostomy by Frank's Method. (*Berliner klinische Wochenschrift*, No. 80, 1895.) By H. Lindner, of Berlin.

The operation of gastrostomy should be classed, according to this author, with that of tracheotomy, and should be considered as giving relief from the impending death by starvation. If, however, the patient is operated upon before the strength has been wasted, and the vitality reduced by lack of food and loss of digestive power, the value of the operation is greatly enhanced and the result obtained may be of more lasting benefit to the patient. This is especially true of non-malignant strictures, which the author deems curable in the majority of cases, and for whose cure he believes this form of operation most fitted. After an extensive experience with other methods of gastrostomy the author believes this method has produced the best results in cases of malignant strictures. The method consists in an incision, opening the peritoneum, the drawing out of a fold of the stomach as large as possible, the fixation of this fold in the peritoneal opening; a second incision a finger's breadth above the border of the ribs, the undermining of the intervening skin, the drawing through beneath the skin of the fold of the stomach, the opening of the stomach, and suturing of it to the second skin incision. That this operation is no more harmful than the older methods as an operative procedure is shown by the fact that all the nine cases operated upon by the author lived over a week after operation. In addition, the food is retained better and there is no overflow of secretion from the stomach, which in the older operations gave rise to excoriations, necrosis of the edges of the wound, and sloughing out of the sutures, together with a consequent loss of nourishment. There is also no tendency to dilatation of the fistula. In the older operations only one case lived to leave the hospital, while in the nine cases operated upon by Frank's method all the patients lived over the first week. One patient died eight days after operation from peritonitis induced by the inclusion of the omentum in the suturing of the stomach to the peritoneum, as he was greatly depressed when operated upon and his vitality was very low. Two others died, one ten and the other twelve days after operation; the first from pneumonia, and the second from bronchiectatic processes with putrefaction, resulting from chronic bronchitis. Of the six other patients who lived over a week four left the hospital in improved condition. One, who had a stricture due to erosion, was completely cured at the end of one hundred and forty-two days, one at the end of thirty days, one at the end of thirty-seven days, and a fourth, a woman, at the end of thirty-nine days after operation. One of these died at home; the woman has not been heard from, and probably died. One was in good condition

three months after operation. In regard to the technique of the operation the author advises that the stomach be well drawn out, and the fold fixed at its base in the peritoneal opening before the passage under the bridge of skin and the formation of the fistulous opening. This prevents the approximation of the two openings and makes the original position of the fistula permanent.

Operative Treatment of Abscess of the Liver. (*Le Progrès Médical*, August 31, 1895.) By M. Foutan, of Toulon.

M. Foutan has attended forty cases of abscess of the liver following dysentery contracted in tropical countries. He has adopted as rules for operating: first, a free incision, at least eight or ten centimetres long, as soon as the abscess is recognized; second, the final resection of one or more costal cartilages to expose the abscess freely; third, the separate suturing of the peritoneum and of the pleura, to stop the penetration of pus into these serous cavities; fourth, the complete curettement of the cavity of the abscess, an excellent method of removing all the diseased tissue and a method which does not predispose to hemorrhage. The best statistics give, for incision or excision by the bistoury alone, since the antiseptic period, from thirty-seven to fifty-one per cent. of cures. M. Foutan has obtained eighty-six per cent. of cures, a result which he attributes to the operative technique and, above all, to the curettement.

The Symptoms and Treatment of Infective Thrombosis of the Cerebral Sinuses. (*Practitioner*, September, 1895.) By George Heaton, M.B., F.R.C.S.

By infective thrombosis of a cranial sinus is meant a blood-clotting which is the direct consequence of the invasion of the sinus by infective micro-organisms. This thrombosis may take place in any one of the intracranial sinuses, and may be due to a variety of causes, such as compound fractures of the skull, either involving the entire thickness of the bone or only exposing the diploe, cellulitis or cutaneous erysipelas of the scalp, and anthrax or malignant facial carbuncle. The sigmoid sinus is the most commonly affected, and it becomes so infected by direct extension of disease from the middle ear. Fortunately, sinus thrombosis is a rare complication of middle-ear disease, but the symptoms of the disease, when well established, are definite and clear. It is, however, in its earlier stages that its recognition is apt to be overlooked. Headache is one of the earliest symptoms complained of, the pain radiating from the affected ear, and being the most acute on the affected side. With the headache are occasional attacks of pyrexia, with vomiting and rigors. The rigors may be extremely severe, the temperature often rising as high as 106° F. The alimentary canal shows signs of general disturbance, and when the disturbance manifests itself in diarrhœa the motions are very offensive. This diarrhœa may be due to an effort on the part of nature to get rid of noxious products, or it

may be caused by the swallowing of fetid sputum which has been coughed up from the lungs. In cases uncomplicated by general meningitis the intellect remains clear; but if meningitis should complicate the case we find delirium, excitement, and hypersensitiveness of the various senses. As the case progresses evidences of pulmonary infection manifest themselves: these are stitch in the side, short cough, a patch of dulness towards the base of the lungs, pleural friction, moist râles, and the expectoration of a prune-juice material having a very fetid odor. Occasionally the chief stress of the disease seems to fall on the abdominal viscera, and then the case resembles typhoid fever. The inflammation frequently spreads from the sinus along the mastoid vein, and may cause suppuration of the tissues over the mastoid. Pain and swelling below the mastoid process, extending downward in the course of the internal jugular vein, are much more important symptoms. Such a sign points with almost certainty to sinus thrombosis. Optic neuritis may be present, and if very marked it points to meningitis as a complication. The diagnosis of this condition, when its symptoms are purely of the abdominal type, is to be made from typhoid fever by the presence of pain in the head, rigors, discharge from the ear, and the swelling and tenderness about the mastoid, and by the absence of typhoid spots. From cerebral abscess the condition under discussion is to be distinguished by the prominent *rôle* the rigors play, by the absence of a slow pulse, of a subnormal temperature, and of gradually deepening coma with paralysis. Acute purulent leptomeningitis is very difficult, and in some cases impossible, to separate from sinus thrombosis. The pains in the head and tenderness and swelling along the course of the internal jugular vein are marked features of the latter condition, while leptomeningitis is accompanied by less severe and less frequent rigors, by delirium, hyperæsthesia of the senses, muscular twitchings, followed by paralysis and unconsciousness. The only plan of treatment which affords any chance for the patient is a prompt opening and cleansing of the diseased sinus and the ligature of the internal jugular vein in the neck. This latter procedure aims to arrest the progress of the thrombus along its most common course, and to prevent portions of the infective clot being carried along into the general circulation. A case is reported which ended fatally, and the notes of the autopsy are given.

On the Calcification of the Tunica Vaginalis as a Complication of Old Hydrocele. Orchidomeningitis Calcificans. (*Journal of Cutaneous and Genito-Urinary Diseases*, September, 1895.) By Roswell Park, A.M., M.D., of Buffalo, New York.

The author reports the case of a man who was a monomaniac, the whole subject of whose thought and worry was a tumor of one testicle. This tumor had been present for eight years, was distinctly hard and nodular, and was the size of a very large orange. The patient was very anxious to have the tumor removed, and wished the operation done without an anæsthetic. Castration was performed without anæsthesia, and the patient

scarcely gave a sign of pain during the operation. There was rapid and complete restoration to health, both mental and physical. The tumor was an ovoid mass about four by five inches; the walls were everywhere tough, and gave one the sensation of an egg-shell. On section the sac wall was found to vary from one-eighth to one-quarter of an inch in thickness, and to be calcareous throughout. Inside of the cavity there were some eight ounces of fluid, which had evidently been pus. The inner surface of the membrane was lined with the ordinary prophylactic membrane, and was rough and irregular. On one side, in its proper place, were the remains of the testicle, whose walls were much thickened, but not calcareous. At the lower end of the enlarged sac wall were found two cysts containing a cheesy material consisting of cholesterine crystals and fat. The condition is an unusual one, and brings about a state of affairs which might baffle exact diagnosis. It is, of course, well known that calcification may take place in any of the serous membranes. This is almost invariably a calcification, and not an ossification. A search through the literature has been made, which, while it is not exhaustive, shows that calcareous degeneration is not infrequently a sequel of hæmatocele of the scrotum, and thus furnishes another argument in favor of the radical treatment of that condition. It also shows more clearly how errors in diagnosis may arise, and, finally, it furnishes the best possible argument in favor of exploration by incision in doubtful cases, since to treat cases in which the tunic is not permitted to collapse by means of ordinary injections is to invite failure, if not disaster. For such cases as the one reported, the most radical treatment possible—namely, that by complete excision of the sac wall—is the only scientific method, and the only one which gives promise of perfectly satisfactory results. A *résumé* of a second case presenting the condition in a less marked degree is given.

On the Treatment of Fractures near a Joint by Rest, aided by Massage and Passive Movement. (*Edinburgh Medical Journal*, September, 1895.) By A. G. Miller, M.D., F.R.C.S.E., of Edinburgh.

The present methods of treating fractures near a joint are unsatisfactory, because, not infrequently, the injured limbs are stiff and comparatively useless even after a long period of treatment. The cause of this unsatisfactory result is probably the long period of rest maintained for the treatment of the fracture. In the case of fracture near a joint the joint is more or less damaged by the same force that fractures the bone. We have then not a simple fracture, but a fracture plus a sprain. If the limb be put in a rigid apparatus and kept there for some weeks, the fracture is being treated, but the sprain is ignored. This practice has arisen from the fear of non-union of the fracture; but ununited fractures are rare, while stiff limbs are very common. Rest alone does not cause anchylosis; but if a damaged joint is put up in plaster for some weeks it will require as many weeks of massage to make that joint useful after the plaster is removed. If any one

should be nervous about the taking down of a fracture twice a week, he should remember that the proper treatment of a fracture obliges the surgeon to take off the splints several times during the course of treatment. If this may be done once or twice for the benefit of the fracture, why not five or six times? And if the fracture has to be taken down for the purpose of readjustment, why not apply a little massage and careful movement at the same time? The advantages of this combination of rest with massage and passive movement are: 1. Complete rest is provided for the union of the fractured bone, except for a few minutes once or twice a week. 2. Swelling and effusion are got rid of more quickly by the massage. 3. Adhesions are prevented by the passive movements. 4. Union of the fractured surfaces is probably facilitated by the massage. 5. Time is saved.

The author exhibited a patient to the society before which the paper was read, who had sustained a fracture of both bones of the leg and who was treated in the above manner. The result was most satisfactory in five weeks.

The Results Obtained by Radical Operation in Uncomplicated Herniæ by the Position Method. (*Archives für klinische Chirurgie*, vol. l., No. 1, 1895.) By Theodore Kocher, of Bern.

The fact that no death occurred after the radical operation for hernia in two hundred and twenty cases operated upon by this author and reported by Beresowsky, makes it certain, for the author, that any patient who has no pathological change in any vital organ may be told that the radical operation for hernia is not dangerous to life. Kocher's early operation, the suturing of the inguinal canal with buried sutures, gave in eighty-four cases absolutely primary union in seventy-four, the patients leaving the hospital without trusses in nine days on the average. In ten cases, secondary union required an average of thirty-four days to complete the recovery; there were six relapses in sixty-four of these cases examined at a later period, due to defective operating and stitch-abscesses. The author believes all cases operated on properly by this method will be cured if the course of healing is aseptic. Forty-eight cases were operated upon by the author's first form of carrying up of the sac. There was primary union in thirty-eight cases, and stitch-abscesses in ten with discharge of the sutures, and sometimes necrosis and discharge of the sac occurred. Only two cases of relapse were found in thirty-one cases examined subsequently, and they were cases in which suppuration had occurred.

This method, therefore, gives certain results where aseptic healing follows. The author's present modification produces better results, which he believes he has obtained by a different position for the sac, involving less torsion and bending. The results in twenty-nine cases were: primary union, twenty-seven times, obtained in nine days; local suppuration in two cases, with recovery in twenty-seven days. No relapse occurred in twenty-two cases examined at a later date. The method of operation is as fol-

lows: An incision is made extending over the entire length of the inguinal canal and slightly beyond it externally. This incision extends down to the fascia of the external oblique muscle; the cremaster muscle and infundibuliform fascia are divided and the hernial sac is carefully dissected up and separated from the cord. The next step is an incision through the fascia of the external oblique muscle, external to the internal ring and in the line of the inguinal canal. Directed by a finger, passed up through the canal to the internal ring, a pair of curved artery forceps are introduced through the incision, carried through the inguinal canal anterior to the cord, and emerge at the external abdominal ring. The freed end of the hernial sac is then grasped and the sac drawn up through the canal and out through the incision in the fascia of the external oblique. Three sutures are then passed through the sac as it lies upon the surface of the fascia, external to the incision, and above and parallel to the outer part of Poupart's ligament. The first suture includes the edges of the incision through the fascia of the external oblique and the hernial sac as it lies in the incision. The sac is then excised above the third suture. The lower part of the canal is now closed by buried sutures, which, however, do not include the cord, which during the operation is carefully guarded. The results obtained by this method lead the author to conclude that it is not only the right but the duty of every physician to advise radical operation in all cases of inguinal hernia in which extraordinary size, incarceration, or inflammation is not present as a complication, or in which disease of vital organs or weakness or old age does not form a contra-indication.

NEUROLOGY.

IN CHARGE OF LANDON CARTER GRAY, M.D., New York City,
GUY HINSDALE, M.D., Philadelphia,
WILLIAM BROADDUS PRITCHARD, M.D., New York City, AND WM. G. SPILLER, M.D., Philadelphia.

Remarks on a Case of Acquired Spastic Paraplegia due to Primary Sclerosis of the Lateral Columns. (*Comptes Rendus Hebdomadaires des séances de la Société de Biologie*, December 6, 1895.) By Drs. J. Dejerine and J. Sottas.

The description given by Charcot and Erb of the symptoms caused by a presumably primary sclerosis of the lateral columns met such favor that the term lateral sclerosis became well known. Every autopsy showed some other lesion, myelitis, disseminated sclerosis, etc., and, until the case published by Strümpell in 1894, no primary sclerosis in these columns had ever been found. Clinicians employed in place of the term implying the supposed organic changes one which expressed merely the chief symptoms, and the name of lateral sclerosis was avoided by many. The case recorded

by Dejerine and Sottas, being, therefore, only the second one on record where true primary lateral sclerosis was found, is of great importance.

The patient had had several attacks of subacute articular rheumatism and had been somewhat alcoholic, but positively denied syphilis. He had had eleven children, of whom three still live. At the age of forty-two sudden weakness of the legs developed, which soon disappeared. Shortly afterwards the legs gradually became again weak and some lancinating pains were experienced. This weakness increased, and ten years after the commencement of his symptoms he entered the hospital of Bicêtre, Paris, and was under the observation of Professor Dejerine for five years. He presented a spastic paraplegia of moderate degree. In repose there was moderate stiffness of the legs with almost complete integrity of the muscular force, excepting a slight paresis of the right leg. Sensation was intact, and there were no fibrillary contractions and no muscular atrophy. The electrical reactions were normal. The patella reflexes were much exaggerated, especially the one on the right side, where ankle-clonus was also present. In walking the legs become stiff, and the gait was typically spastic. Romberg's sign failed. The action of the sphincters was only slightly altered, and there was only a little slowness in micturition, which also required some effort. Death was due to pneumonia.

Sections from the motor cortex, the two internal capsules, the crura, the medulla, and the cord were examined microscopically. Alteration was noticed only in the white matter of the cord; the gray matter was normal throughout, at least by carmine staining no appreciable cellular change was found. There was a very slight sclerosis in the central part of Goll's column in the cervical and cervico-dorsal regions only, and a sclerosis in the two lateral columns. This latter was almost symmetrical and more marked on the right side than on the left. The greatest change was between the fifth and twelfth dorsal roots; here the sclerosis occupied the area of the pyramidal tracts and extended somewhat in advance of these. It was especially pronounced in the portion contiguous to the posterior horns. In the lumbar region the sclerosis was limited to the pyramidal tracts, and gradually diminished downward, and disappeared between the fifth lumbar roots and the first sacral. Above the fifth dorsal segment the sclerosis was less evident, especially on the left side, and in the cervical region it disappeared on the left side at the level of the fifth cervical roots, on the right side at the level of the third.

This sclerosis is due to atrophy of the nerve-fibres with compensatory growth of the interstitial tissue, and is less intense than sclerosis following secondary degeneration. It was not noticed by the naked eye after hardening. Throughout the cord the vessels and meninges and spinal roots were normal. According to the opinion of Dejerine and Sottas, the paraplegia was unquestionably due to the sclerosis of the lateral columns, which was primary. The case differs from Strümpell's, as the sclerosis was not limited to the pyramidal tracts, but extended a little in advance of these, and

was not found above the cervical region, and as the columns of Goll in the cervical and superior dorsal regions showed a slight sclerosis of their central portion.

Acute Meningitis from the Staphylococcus. (*Gazette des Hôpitaux*, December 10, 1895.) By M. Lorrain.

It was at one time supposed that all cases of meningitis were tuberculous. Many investigators have shown the fallacy of this conception, and Netter was able to find the pneumococcus in twenty-seven out of forty-one cases of suppurative meningitis. At present this micro-organism is considered the most common cause next to the tubercle bacillus, and the epidemic form of meningitis is probably due to this. Krause was the first to encounter the streptococcus. The bacillus of Eberth is hard to distinguish from the colon bacillus; each of these has been found. The staphylococcus has been noticed in two cases: the first one, published by Galippe, is questionable; in the second, published by Le Gendre, the staphylococcus pyogenes aureus was seen in the pus of the meninges. M. Lorrain describes a third case, in which the autopsy was made thirty-six hours after death, and the staphylococcus and the colon bacillus were present in the meninges. He considers the infection by the colon bacillus to have been post mortem. No other micro-organisms could be detected.

A Case of Tumor of the Vertebral Column. (*Berliner klinische Wochenschrift*, No. 47, 1895.) By Professor H. Oppenheim.

A child, aged three years, complained of pain in the right arm, and the mother noticed that the hand and fingers were less used; she observed also a diminution in size of the right pupil and of the opening between the right eyelids. After a few weeks weakness developed in the right leg, which later involved the left also, and caused complete paraplegia with vesical trouble. The child could move the shoulder and elbow of the right side with normal power, but the muscles of the hand and fingers were almost completely paralyzed; the movements of the interossei and of the muscles of the thenar and hypothenar eminences failed. The condition of claw-hand, with atrophy, existed. Electrical excitability was much decreased. The reaction of the right pupil was normal, and moderate œdema was noticed on the right side of the face, especially about the eyelids. The patella reflexes were increased, and the legs were stiff. It was not possible to test sensation satisfactorily. No tender points could be found over the vertebræ. The veins of the right upper thoracic region were enlarged.

The diagnosis of some morbid process at the level of the eighth cervical and first dorsal segments on the right side was made. From the investigations of Madame Dejerine-Klumpke, it is well known that the eighth cervical and first dorsal roots innervate the muscles of the thenar and hypothenar eminences, the interossei and the flexors of the hand and

fingers, also that oculo-pupillary fibres pass from the first dorsal root through the ramus communicans to the sympathetic. In individual cases the second and third dorsal roots may take part in the innervation of the dilator muscle of the pupil. Due to the gradual development of the symptoms the diagnosis of a neoplasm was probably correct. Tuberculous spondylitis was thought of, but was considered improbable on account of the symptoms being at first unilateral. The autopsy showed a sarcoma involving the lower cervical vertebræ with metastasis in the lungs. It was a typical case of Klumpke paralysis, and as such the diagnosis of the location could be made with certainty during life.

A New Case of Peripheral Neuro-Tabes. (*Revue de Médecine*, No. 4, 1895.) By Professor J. Dejerine.

Professor Dejerine publishes, under the above title, a new case of the affection described by him in 1883 and 1884, and which is a form of tabes due to peripheral neuritis. A man of forty-two years, who had previously been in good health, had never had syphilis and had not been alcoholic, was attacked by diphtheritic angina. This lasted about ten days when recovery seemed complete. About a month after the beginning of the throat trouble he began to have tingling in the legs, and his gait was less steady; later, walking became still more difficult. Simultaneously sensation in the skin of the feet, legs, and hands was almost entirely lost. After another month the gait was typically ataxic, and the patient was obliged to separate his legs widely in order to stand. He threw his feet forward and outward in walking and brought his heels to the ground first. It was necessary for him to regard attentively the place where he wished to put his foot, and he was obliged to support himself with a cane. He was not able to stand erect with his eyes closed (Romberg's sign). The muscles of the limbs were normal in regard to size and had lost nothing of their force, and there was no trace of talipes. The electrical reactions for both currents were normal. The patella and plantar reflexes were completely lost on both sides. No spontaneous pains were felt in the legs and none of importance on pressure of the nerve-trunks; merely a sense of numbness in the feet, of a sensation as if walking on cotton, was complained of. The objective sensation for all qualities was abolished in the feet and reappeared gradually in examining the thighs. He was able to recognize the positions in which his limbs were placed, but was not able to touch promptly a given part of his body with his finger when his eyes were closed. The same troubles of sensation, though less in degree, existed in the hands; they felt as if covered with gloves. All parts of the face were normal. The sphincters were not affected. The duration of the whole process was about three and a half months. There can be no doubt that the diphtheritic poison was the cause of the trouble, and that it acted on the sensory nerves alone. This form must be distinguished from true tabes by rapidity of evolution, absence of oculo-pupillary phenomena, history of infection, integrity of the sphincters,

etc. Contrary to ordinary neuritis, the nerve-trunks were not sensitive on pressure in this case.

A Case of Cerebral Tumor with Hemianæsthesia. (*Brain*, Parts II. and III., 1895.) By H. J. Mackay, M.D.

The patient was admitted to the hospital complaining of severe headache, inability to walk, giddiness, numbness, and some weakness of the left side. He had had cramps in the legs, chiefly in the calves, and at this time his limbs were stiff and painful. He had never had convulsions or motor spasms, nor had he ever lost consciousness. Numbness had gradually developed in the left side of his body, which was also somewhat weaker than the right. His wife had observed an increasing torpor. He had had severe attacks of vomiting independently of taking food, and had complained of failure of sight. His mental condition was such as is found in that form of sensory aphasia known as word-deafness. Pain was severe in the frontal region, and cranial percussion elicited tenderness over the right temporo-parietal region. Motor power was slightly impaired on the left side, but he had still considerable power in the left hand and in the left leg. There was no rigidity on passive movement and no atrophy. Electrical irritability was diminished for both currents on the left side of the body. Knee-jerks were normal. The right pupil was dilated and did not react to light, left reacted sluggishly. Muscular sense was much impaired on the left side of the body, likewise the sensations of touch, pain, and temperature. The left half of the face was included in the anæsthesia. Normal sensation was recovered about an inch to the right of the mesial line. The sense of smell was much impaired on both sides; the right eye showed optic neuritis, and the left disc could not be examined. There were ptosis and paralysis of the internal rectus on the right side. Hearing was more impaired in the right ear, and taste was affected on both sides of the tongue. He was frequently seen to move all his limbs, raise himself and sit on the side of his bed, but was unable to stand or walk on account of vertigo. The autopsy disclosed a tumor in the right lower temporo-sphenoidal region which involved the middle and lower temporo-sphenoidal convolutions. The right oculo-motor nerve was compressed, but there were no naked-eye changes in the fifth of the left side, nor in the Gasserian ganglion, nor in the eighth of the right side. On the median aspect the right hemisphere was evidently compressed and softened in the hippocampal, uncinate, and occipito-temporal gyri, and the medullary matter of the lingual gyrus was softened to the consistency of pulp. The bed of the tumor occupied most of the thickness of the temporo-sphenoidal lobe in its lower two-thirds and its posterior half. The posterior fibres of the internal capsule were not involved. The fibres of the crusta and tegmentum showed no visible change. The author refers to the few clinico-pathological cases for the localization of the cerebral sensory areas which have been published. Ferrier, Horsley, and Schäfer have considered the gyrus fornicatus as representing the area of cutaneous sensi-

bility, an opinion shared by Mills, who includes the hippocampal gyrus, the precuneus, and the postero-parietal convolutions. The absence of morbid change in the sensory tracts of the pons, crus, and internal capsule points to the cortical areas involved as the seat of the sensory disturbance. It is proper to associate the anæsthesia with the cortical lesions on the outer and mesial surfaces of the temporal lobe and with the destruction of the adjacent medullary tissue. Disturbance in hearing, especially on the right side, was probably due to intracranial pressure; loss of taste and smell on this side may have been due to the lesion in the hippocampal gyrus, whereas the involvement of the temporal lobe explains the word-deafness.

OBSTETRICS AND GYNÆCOLOGY.

IN CHARGE OF RICHARD C. NORRIS, M.D.,

Lecturer on Clinical and Operative Obstetrics in the University of Pennsylvania; Obstetrician-in-Charge, Preston Retreat; Visiting Obstetrician, Philadelphia Hospital; Gynæcologist, Methodist Episcopal Hospital; Consulting Obstetrician and Attending Gynæcologist, Southeastern Dispensary and Hospital for Women and Children,

AND

LAWRENCE S. SMITH, A.B., M.D.,

Instructor in Clinical Gynæcology in the University of Pennsylvania.

Treatment of Eclampsia. Report of One Hundred and Twenty-nine Cases. (*Centralblatt für Gynäkologie*, 1895, Nos. 46, 47, and 48.) By Professor Zweifel, of Leipzig.

The author divides the cases into two groups,—those occurring between April, 1887, and January, 1892, when the expectant treatment was in vogue, and those occurring after January, 1892, on whom the most active treatment was employed. This latter treatment, as advocated by Dührssen,[1] consists in the immediate delivery of every woman after the first convulsive attack, whether before or during labor, incising, if necessary, the cervix, and even the vaginal and retrovaginal septum, the theory being that the rapid emptying of the pregnant uterus is followed in 93.75 per cent. of cases by the sudden cessation of the paroxysms. Professor Zweifel then proceeds to verify this statement from his own experience. The mortality among primiparæ was 16.6 per cent.; that among multiparæ, 5.5 per cent., —the difference being due to the greater length and difficulty of labor among the former. The mortality among those attacked ante partum was 17.25 per cent., intra partum 14.29 per cent., and post partum 10.5 per cent. These statistics are compiled from eighty-three cases, it being impossible to determine when first attack occurred in the other cases. Of the one hundred and twenty-nine cases, twenty, or 15.5 per cent., were attacked post partum, and of these twenty-two died, or ten per cent. The number

---

[1] Archiv für Gynäkologie, vol. xliii. p. 159.

of convulsions, the duration of each, and the rapidity with which they succeed each other, have great value as regards prognosis. Also, the condition of the urine and character of the pulse and temperature are worth notice. Every case showed albumin in the urine. If the urine was scanty, of high specific gravity, and tinged with blood, the case was hopeless. A small, rapid-running pulse is not so serious as is a high fever, the higher the fever the worse the prognosis. The cause of this fever Zweifel believes to be, in the majority of cases, a coexisting pyogenic infection, and not muscular exertion and diminished radiation of heat. Considering, now, the results of treatment, the expectant method gave a mortality of 32.6 per cent. in forty-nine cases; the active, a mortality of fifteen per cent. in eighty cases. Zweifel attributes this great difference in results more to other improvements in the treatment than to the forced delivery. The active treatment is based on the theory that the convulsions cease as soon as the uterus has been emptied of its contents in the majority of cases (89–93 per cent.); but a comparison of the cases shows that of twenty-seven cases delivered by Dührssen's method, in fourteen, or fifty-two per cent., the attacks ceased, while in thirteen, or forty-eight per cent., they continued. On the other hand, of the thirty-two cases delivered by the more conservative method, in twenty-two, or sixty-nine per cent., the attacks ceased, while in ten, or thirty-one per cent., they continued. From these figures he concludes that the more radical interference, by the irritation it produces, renders the patient more liable to a continuance of the convulsions. He concludes: "The result of the classification of my cases I condense as follows: that the complete evacuation of the uterus favors the cessation of the eclamptic attacks, and, indeed, the more so the more conservative the method of evacuation has been. On all occasions, when the question of incision arises, the maxim should be, as large as necessary but as small as possible." The article concludes with the following rules for treatment:

1. During labor, finish the delivery as soon as possible, under the administration of an anæsthetic if the os is not dilated; although most authorities advise an expectant plan of action, sanctioning operative interference in exceptional cases only, Professor Zweifel says, "I advise as an axiom, founded on my own experience, the operative completion of labor in every case." He recognizes two methods of procedure in such cases, according as the obstruction is caused by the undilated os alone or by the os and the vaginal cervix also.

2. In the first case the result may be accomplished, as a rule, by the conservative and safer method of dilatation with inflatable rubber bags; in extreme cases, by small incisions that give rise to little hemorrhage.

3. In the case of an eclamptic patient, with the vaginal cervix still contracted and the external os barely admitting one finger, a beginning should be made with the bags. The incisions through the cervix here must be far greater, and one must expect considerable bleeding to follow.

The hemorrhage takes place post partum, and Zweifel employs Bill-

roth's or similar forceps, and a tamponnade of sterilized cotton pledgets after the uterus has been wiped out with sterile gauze.

4. Since one cannot tell beforehand how much blood will be lost in such a delivery, bloodletting should be postponed until the uterus has been emptied. On the other hand, venesection to the amount of five hundred grammes is of advantage if the eclamptic seizures continue, and, in general, where they are accompanied by a hard, tense pulse, even before the delivery, if the conditions correspond to 3, for many older authors have asserted that dilatation is greatly accelerated by venesection.

5. Nothing must be given to the unconscious patient to swallow, but the stomach-tube should be used exclusively, and, as a preparatory step, the stomach should be washed out whenever disturbances of the gastro-intestinal tract may be assumed. Drinks containing citric, tartaric, or acetic acid should be poured into the stomach.

6. As anæsthetics, both chloroform and ether are serviceable, but are to be used only during the operative delivery. Opium and chloral are discarded, as tending to prolong the eclampsia.

7. The most thorough asepsis is here the more desirable as infection prolongs the duration of the attacks.

Palliative Treatment of Gonorrhœal Tubal Disease. (*Medical Record*, December 14, 1895.) By W. R. Pryor, M.D.

The author recognizes the fact that the radical cure of inflamed tissues in which suppuration has occurred can be effected only by the removal of those tissues, especially when the inflammation has occurred within a preformed sac. The most rational operation for gonorrhœal tubal disease is removal of the uterus and its appendages, but the nervous sequelæ of such an operation are usually so serious that a surgeon often hesitates to perform it until other less radical methods have failed. Pryor divides his treatment into three classes, according as he has to deal with an acute salpingitis, a recurrent chronic form, or a hydro or pyosalpinx. In cases of acute salpingitis, the first attack with one or both tubes swollen and tender, he curettes the uterus very thoroughly to remove the source of future danger in the endometrium. In fourteen out of seventeen cases this was all that was necessary. The three other cases required more radical measures. Cases of recurrent chronic salpingitis are least affected by palliative treatment. The walls of the uterus and tubes have become the seat of fibrous thickening, and the organs themselves are often bound firmly to the surrounding structures. The best that can be done is to curette the uterus, open the posterior cul-de-sac, break up adhesions, and drain the resulting cavity with gauze. For hydro- or pyosalpinx removal offers the only chance of a cure, but as a palliative measure the author curettes and packs the uterus, opens the posterior cul-de-sac by a large incision, ruptures the tubes and evacuates their contents, packs and drains the resulting cavities with iodoform gauze. He believes that if future coition could be prevented

eighty per cent. of the cases thus treated would have no reinfection. In all such cases there is no hope of gestation, and the sexual organs are useless; but such palliative treatment is far more acceptable to the patients than the mental and physical wretchedness that follows the radical operation.

Catgut sterilized with Formalin. (*Centralblatt für Gynäkologie*, No. 46, 1895.) By Hans Vollmer, M.D., of Berlin.

The excellent results obtained with formalin in hardening and preserving pathological specimens, and its energetic bactericidal action, led Kossmann to try it as a means of sterilizing catgut in his private hospital in Berlin. As a result of the experiments, it is claimed that catgut wound on spools, soaked in a two-per-cent. aqueous solution of formalin for twenty-four hours, and then kept until needed in a 0.5-per-cent. solution, will be perfectly sterile and retain its strength.

In order to get rid of all traces of formalin, Vollmer advises that the raw gut, cut the desired length, be wrapped singly in filter paper, soaked in two-per-cent. solution of formalin for twenty-four hours, the excess of fluid drained off between two layers of filter paper, the packets placed in a drying oven for a short time at a temperature of 60° C. (140° F.), in order to evaporate the remaining fluid. The gut may then be preserved dry until wanted, when it should be soaked in sterile fluid for a few minutes to render it flexible and ready for use. Catgut thus prepared is strong and durable, pliable but not slippery in the hands, and can be tied readily. Absorption does not begin until the fourteenth day,—a decided advantage. Since February, 1895, it has been used exclusively in the clinic, and has given most satisfactory results.

OPHTHALMOLOGY.

IN CHARGE OF CHARLES A. OLIVER, A.M., M.D.,
Philadelphia, Pennsylvania,
AND
EDMUND LANDOLT, M.D.,
Paris, France.

Blepharitis Trichophytica. (*Annali di Ottalmologia*, xxiii. Fasc. 5.) By Prof. V. Mibelli, of Parma, Italy.

Professor Mibelli has had the exceptional opportunity of studying two such cases. Those afflicted had obtained this curious condition from three other members of the same family, who, in turn, had contracted it from cattle affected with trichophytosis. The eyebrows were unaffected. The presence of the parasite was ascertained by extracting some of the hairs. The chains of spores could be plainly recognized. In the treatment he first employed an ointment of sulphur and salicylic acid and a 1–500 solution bichloride of mercury; but finding no results, he effected an absolute

cure by repeated epilation. He believes that the diagnosis is at times rendered uncertain by the presence of crusts and scales, which prevent the broken and distorted cilia from being seen. He thinks that the condition of those cases which are able to resist invasion to a great degree must be ascribed in part to the infection coming from a lower animal.

Variation of the Pupil dependent upon Pulmonary Disease of Tuberculous Nature. (*Annali di Ottalmologia*, Anno xxiii. Fasc. 6.) By Dr. Rampoldi, of Pavia, Italy.

The author has seen a case in which, with well-marked tuberculosis of the apex of the right lung, there was incomplete ptosis of the right eyelid, myosis, and sluggish iris. With Destrée, he believes that the ocular symptoms may be dependent upon pressure upon the sympathetic nerve by enlargement of the bronchial lymphatic glands.

Atheroma complicating the Operation for Cataract. (*McCaskey's Clinical Studies*, August, 1895.) By Dr. Wheelock, of Fort Wayne, Kansas.

The author most properly thinks that atheroma constitutes an element requiring very careful consideration as a complication in the operation for cataract. He says that the fact that the surface operated on is small does not lessen the fact that structural changes dependent upon defective nutrition may follow the incision made in the cornea; because this tissue must be repaired both by direct blood-supply and indirectly through imbibition, depending upon the location of the wound. He thinks that if the incision lie within the scleral tissue, there is direct repair; if in the corneal tissue wholly, the repair is by imbibition. He believes that the form of destruction following operations on tissue supplied by atheromatous vessels is necrobiotic in type, as, in this form of degeneration, the nutrition is most interfered with in the process of reforming the structural elements. He records two instances of this character, one resulting in panophthalmitis and the other in corneal necrosis.

A Clinical and Experimental Study of so-called Oyster-Shuckers' Keratitis. (*Bulletin of the Johns Hopkins Hospital*, November–December, 1895.) By Robert L. Randolph, M.D., of Baltimore.

As the result of an extended clinical experience and a careful experimental research with this peculiar form of disease, the author arrives at the following interesting and valuable conclusions:

1. Oyster-shuckers' keratitis may be defined as a traumatic keratitis where the injury is produced by a particle of the oyster-shell.

2. The disease is chiefly remarkable for the rapidity with which the cornea undergoes necrosis at the site of the injury, this area of necrosis being usually very small, owing no doubt to the small size of the foreign body. Small foreign bodies of copper, steel, and sand usually produce no

appreciable keratitis, and, even when they lodge in the cornea, commonly require several days to cause a noticeable inflammation. On the other hand, the oyster-shucker presents a marked infiltration of the cornea at the point of injury within twenty-four hours after the accident.

3. This decided reaction on the part of the cornea makes the injury a peculiarly dangerous one when a large area is wounded, or when entrance has been made into the anterior chamber, such conditions in my experience being invariably followed by loss of the eye through panophthalmitis. How often do we see the cornea injured in the same degree by other kinds of foreign bodies and still the vision not entirely destroyed!

4. Bacteriological investigations failed to discover any specific organism, nor did any of the organisms obtained from cases of oyster-shuckers' keratitis manifest any pathogenic properties when introduced into the corneæ of rabbits, with the exception of the pyogenic cocci. It is not likely, then, that the disease is of parasitic origin.

5. The carbonate of lime, of which the oyster-shell is almost entirely composed, was found to possess qualities irritating enough to call forth a keratitis when introduced into the cornea of a rabbit, and it is more than probable that several other chemical ingredients of the shell would be more or less irritating to the cornea.

6. It is certain that bacteria always play a part in traumatic keratitis, but it is evident that in this variety of traumatic keratitis the cornea is rendered especially susceptible to the effects of micro-organisms, by the irritating chemical ingredients of the oyster-shell, notably the carbonate of lime.

PATHOLOGY.

IN CHARGE OF ALLEN J. SMITH, A.M., M.D.,
Professor of Pathology in the Medical Department of the University of Texas, Galveston, Texas,
AND
HENRY W. CATTELL, A.M., M.D.,
Demonstrator of Morbid Anatomy in the University of Pennsylvania; Prosector to the American Anthropometric Society; and Pathologist to the Presbyterian Hospital, the Institution for Feeble-Minded Children at Elwyn, etc.

The Bacteriological Examination of Nine Autopsies on Cases of Diphtheria treated with Antitoxin. (*Boston Medical and Surgical Journal*, December 12, 1895.) By Wm. Royal Stokes, M.D., of Boston.

The results of the examination of nine autopsies on diphtheria cases performed at the Boston City Hospital since January 1, 1895, are here given. These were all uncomplicated cases of diphtheria, in which antitoxin had been administered. The method of examination consisted in making cultures on coagulated blood-serum "slants" from the lung, liver, spleen, kidney, and the blood of the heart.

In all of the cases the bacillus diphtheriæ was found post mortem in cultures from the respiratory tract. In eight of the nine cases there was a well-marked invasion of the blood by the pyogenic cocci. The results in detail are as follows: In five cases the streptococcus was found in the liver, spleen, kidney, and blood of the heart; in one case in the kidney and blood of the heart; and in one case in the spleen. The pneumococcus was found in two cases in the kidney, in one of which the streptococcus was also found in the spleen. In the cultures from one case the only organism present was the bacillus coli communis. In the lungs of all these cases the bacillus diphtheriæ, streptococci, pneumococci, and the staphylococcus pyogenes aureus were found, either alone or in various combinations.

The presence of these organisms in the various viscera enables us to better understand the fatal issue in spite of the antitoxin given; for this agent cannot be assumed to act against any other organism than the bacillus diphtheriæ. As to the occurrence of the latter in the internal organs in these nine cases, it has been found in the kidney in four cases, and once in the heart and spleen respectively.

Cyst-Formation in the Thymus Gland and a Contribution to the Theory of the Dubois' Abscesses. (*Zeitschrift für Heilkunde*, 1894, xv.) By H. Chiari.

This author's observations have led him to conclude that the abscesses of the thymus described by Dubois as characteristic of congenital syphilis, and also those described later by other writers, have not been sufficiently proved. The great resemblance between pus-cells and the small thymus cells, and the presence of small spaces in the tissue of the thymus, make a diagnosis of abscess difficult. He has found in the thymus of still-born children with congenital syphilis numerous pea-sized spaces containing a pus-like fluid which under the microscope appeared to contain pus-cells. These were to all appearances the abscesses described by Dubois. Cysts were also found which contained epithelioid and lymphoid cells, both of which are normal constituents of the thymus tissue. In some places the interior of the cyst was connected with the wall, suggesting the formation of the abscess-like cysts of Dubois by an extension of the connective tissue into the concentric bodies. The author has compared these cases with thirty-three non-syphilitic ones, including fœtal, new-born, and older children. The concentric bodies were found in every case. In sixteen the connective tissue extended into the concentric bodies, as in the cases described by Dubois.—*Centralblatt für die medicinischen Wissenschaften.*

Congenital Absence of the Vermiform Appendix. (*University Medical Magazine*, December, 1895.) By John M. Swan, M.D., of Philadelphia.

The specimen was taken from a male subject in the dissecting-room of the University of Pennsylvania. After a careful search no trace of an

appendix could be found. The wall of the bowel presented a perfectly smooth appearance; the serous covering showed no cicatrical tissue indicating previous operation. On examining the cæcum from its internal surface, the ileo-cæcal valve was seen to be normal in situation and appearance. The author considers this a case of congenital absence of the vermiform appendix. On reviewing the literature of the subject, he finds one case reported in which the appendix was absent, in a male child who died four days after birth of intestinal obstruction, the autopsy showing that the small intestine ended in a blind pouch. Wharton reports cases of congenital absence of the cæcum and a portion of the colon, but no case of a well-developed cæcum with absence of the appendix vermiformis. Guitéras has seen one case occurring on the autopsy-table at the Philadelphia Hospital, in which the vermiform appendix was congenitally absent. Kelynack states that complete absence of the appendix has been recorded by Ferguson, who reported one instance in two hundred dissections; and also quotes Darwin and Treves as saying that the appendix is sometimes wanting. Taking into consideration the few instances reported in literature, it would seem that the condition is far from common.

FORENSIC MEDICINE.

IN CHARGE OF LORENZO D. BULETTE,
Of the Philadelphia Bar.

CONTRACT FOR THE SALE OF A PHYSICIAN'S PRACTICE OF WHICH SPECIFIC PERFORMANCE WAS DECREED.

Doctor A. had been a practising physician in the town of L. for twelve years previously to February 6, 1888. Doctor N. had commenced the study of medicine with Doctor A., and, after his graduation from the College of Physicians and Surgeons at M., in March, 1885, returned to L. and formed a partnership with his preceptor, Doctor A., for the practice of medicine. At the expiration of a year, the partnership was dissolved, and Doctor N. continued in the practice for himself down to February 6, 1888, Doctor A. also practising for himself until July, 1886. Three years before he had sold out his practice to one Doctor G., stipulating verbally that, at the end of three years, he would cease practising. The purchase of Doctor G. included, besides Doctor A.'s practice, the latter's property in L. valued at fifteen hundred and twenty-five dollars, and Doctor G., for a like consideration, sold the same to Doctor N. Doctor

A., at the end of three years, stopped practising about three months, then, disregarding his agreement with Doctor G., commenced again and continued until February 6, 1888. On the latter date Doctor A. and Doctor N. entered into another agreement, this time in writing, whereby, in consideration of two hundred dollars, Doctor A. covenanted: *First*, That he would not practise as a physician at L., or within eight miles thereof, for a period of ten years. *Second*, That he would use his influence in favor of Doctor N., and remain at L. for three months, so as to prevent opposition. *Third*, That he would not manufacture or put on sale any medical preparation or compound during the ten years. *Fourth*, And for the true performance of the covenants of the contract, bound himself in the penal sum of four hundred dollars.

Doctor N. paid the full consideration, and Doctor A. removed to a distant county, but in less than four years returned to L. and commenced again to practise medicine there. Doctor N. notified him that he was violating his contract, and requested him to stop practice, but Doctor A. persisted; he even sent cards to a large number of Doctor N.'s patients inviting their patronage. Thereupon Doctor N. filed a bill in equity, averring the facts as here stated, and praying an injunction to restrain him from practising at L. in violation of his contract.

The answer of Doctor A. admits the execution of the agreement, and the payment of the consideration; it also admits that he resumed practice in L., and the manufacture and sale of medicine; but sets up a parol understanding or agreement with Doctor N. that he was to return if he paid back the consideration, and averring that the four hundred dollars designated as a penalty in the agreement is liquidated damages, and further averring his readiness and ability to pay the same.

After a hearing the lower court dissolved the preliminary injunction and entered a decree against the plaintiff, basing such decree upon two conclusions: *First*, That the penal sum of four hundred dollars in the contract is to be treated as liquidated damages. *Second*, That the plaintiff had an adequate remedy at law for the breach of the contract.

On the first point, the Supreme Court, after reviewing the authorities, said, "The intent of the parties in most cases, but not in all, will determine whether the sum stipulated is a penalty or liquidated damages. Calling it a penalty is some evidence that it was so intended, but this is overcome if equity demands it shall be treated as liquidated damages. And that, in determining the equities of the particular case, the relation which the sum bears to the extent of the injury provided against, will be considered. That where there are a number of covenants, and the sum named would be payable for a breach of any one of them, even the least, it is a penalty.

"Take now the circumstances under which this agreement was made, and the terms of it, to discover the intent. It is called a penalty, which is some evidence, though slight, that it was so intended. A., by the death of his father, found it necessary to remove and locate in C. County. In con-

sideration of two hundred dollars he covenants not to practise in L. for ten years. He was a physician forty years of age; his practice was well established and valuable to another physician, especially to a young man, who had graduated but a short time before; it was of but small value to A., for he must abandon it and take up his residence in another county, even if he gets nothing for it. Its sole value to the purchaser, however, depends on A. remaining away, in which event it is of very great value. It is of no value at all if A. soon returns. Is it reasonable to suppose that N. intended A. should have the privilege of resuming practice on payment to him of a sum equal to forty dollars per year, about the value of the patronage of a single patient? A. admits, in his testimony, that many of his old patients have come back to him since his return, and he was there less than a year before testifying. The sum is so out of proportion to the whole damages which N. would sustain by a breach of it that it seems to us improbable that it was intended as liquidated damages by him. But, change the action to one for damages, and suppose that N. had brought suit against A. for selling a single phial of medicine for a dime, which A. covenanted not to do, would A. have submitted to a judgment of four hundred dollars in liquidated damages for the breach, or would he have invoked equity to relieve him from the gross extravagance and hardship of the full penalty, wholly out of proportion to the nature and extent of the injury? Or, if he had returned four days before the end of the ten years, and commenced practice, would the four hundred dollars, or at the rate of one hundred dollars per day, have been the liquidated damages for the violation of the covenant? Yet the sum named here is payable for the breach of any one, even the least of these covenants. There is nothing in the nature of the contract or the circumstances attending it which points to an intent of the parties to treat this sum other than what they call it, a penalty.

"While there is much variance in the authorities on this question, the equities of the particular case often determining the construction put upon the language, nevertheless the defendant has shown no equity which should move a court in his favor. He first sold out his property and practice for a large sum to Doctor G., and N. bought from G. Then defendant resumed practice; then again, by the most explicit agreement in writing, he sold to N. and deliberately violated his covenants, to the manifest injury of N., and, on his own showing, he did this because it paid him better to break his contract than to keep it. The equities of the case, therefore, are all with the plaintiff. We hold that the four hundred dollars stipulated is a penalty only. The contradictory parol evidence is without significance, in view of the plain terms of the contract and the circumstances surrounding the parties when they entered into it; we do not attempt to reconcile it, because the contract itself is not ambiguous, and the circumstances under which it was made are undisputed; these are the controlling facts in settling its interpretation."

As to the second point: the Supreme Court determined that, from the

very nature of this contract, an action at law was a wholly inadequate remedy for its persistent violation during ten years, and therefore equity will specifically enforce performance of it by injunction. And it was accordingly decreed that the decree of the lower court dismissing the bill be reversed at cost of defendant, and the bill be reinstated for further proceedings in the court below to determine the amount of damages sustained by plaintiff between the return of the defendant to L. and the issuing of this injunction; and, further, that an injunction issue restraining the defendant from practising as a physician at L., and within eight miles thereof, until the sixth day of February, 1898, and from manufacturing or putting on sale any medical preparation during the same time.

It is to be observed that contracts of the above kind are technically known and classified as those in *restraint of trade*, and they depend for their validity upon whether such restraint is total or partial. If the restraint is total, the contract is void as against public policy, and cannot be enforced; but if such restraint is partial, and at the same time reasonable and founded on a good consideration, the contract is valid and will be enforced. There are two reasons why a contract in total restraint of trade is void: one is the injury to the public by being deprived of the restricted party's skill and industry; the other is the injury to the party himself by being precluded from following his profession or occupation, and thus being prevented from supporting himself and his family.

BOOK REVIEWS.

MOULLIN'S TREATISE ON SURGERY. Edited by John B. Hamilton, M.D., LL.D. Third American Edition. Philadelphia: P. Blakiston, Son & Co., 1895.

The very favorable comment accorded to previous editions of Moullin's treatise upon surgery is an evidence that the work is fully appreciated by the profession. In the present edition a considerable amount of new matter has been added and certain rearrangement of subjects has been made. The chapter upon the treatment of wounds is not what we would expect to find. The antiseptic method of wound treatment is fully detailed, but the more popular and more universally practised aseptic method is not mentioned. The value of heat as a sterilizer for instruments and dressings is not alluded to, and these omissions, we think, detract from the value of the work. The illustrations, as a rule, are excellent, but the crude diagrammatic representations of the most important bandages do not add to the artistic appearance of the work. The chapters treating of diseases and injuries of the blood-vessels, the joints, and the intestinal canal are especially thorough and modern with the exception of the article upon typhlitis and perityphlitis. These diseases are briefly considered, and the chapter is certainly not up to the standard of recent articles upon the subject of appendicitis.

The American editor has done much to make the work more useful and popular with American practitioners; this will be noticed if we compare it with the English edition. With the few exceptions we have mentioned the work is an excellent one and can be recommended as a safe guide to modern surgical practice. H. R. W.

Transactions of the Colorado State Medical Society. 1895. *Twenty-fifth Annual Convention.* E. R. Axtell, M.D., secretary.

In this volume of five hundred and fifty pages there are fifty-five papers, many of them of the greatest interest. A committee of the society have made an extensive investigation of the history of tuberculosis, especially regarding the influences associated with its contraction in Colorado. Reports for only 1893 and 1894 are made for the reason that outside of the city of Denver absolutely no official records of births and deaths had been made prior to June, 1891, and then but in one place,—Pueblo. In two years one hundred deaths occurred from tuberculosis specified as contracted in Colorado. In one hundred and seventy-three deaths from tuberculosis the place of origin was not specified, while five hundred and thirty-nine cases originated outside the State. Twelve per cent. of all deaths are from tuberculosis, while it would appear that the deaths from indigenous consumption constitute about ten per cent. of all deaths from phthisis. We notice that the population of Denver is rated at 110,000 in 1894 against 125,000 in 1893, a serious falling off for the western capital. Investigations of this kind are of great value in determining the nature of the spread of tuberculosis, and, supplemented as they are in this volume by the valuable contribution of Professor Victor C. Vaughan on the "Restriction of Tuberculosis," much good will result. Professor Vaughan deals largely with the life history of the organism, how the disease is acquired, and how it may be prevented. He rightly believes that there is no evidence that climate gives immunity to this disease. Acquiring tuberculosis and arresting its progress when once acquired are two different things. Professor Vaughan advocates, among other thing, that schools for the instruction of consumptives in the methods of taking care of themselves and preventing the spread of the disease should be established. This would result in lengthening their own lives, in rendering them more comfortable while they do live, and would save many others from infection. These schools should consist of model hospitals where the consumptive would be both patient and pupil. Dr. Vaughan declares that every State should establish one or more hospitals for the education and treatment of its consumptives. G. H.

Pregnancy, Labor, and the Puerperal State. By Egbert H. Grandin, M.D. and George W. Jarman, M.D. Philadelphia: The F. A. Davis Company, 1895.

We have carefully read this volume, which is a companion of the "Obstetric Surgery" that we had the pleasure of reviewing when the latter appeared. The present volume is an exposition of pregnancy, labor, and the puerperal state, characterized by the same practical treatment noted in the "Obstetric Surgery."

Part I. considers the differential diagnosis, the duration, and the hygiene of pregnancy; the pathology of pregnancy; and the diagnosis of the presentation and position of the fœtus.

Part II. is a very excellent study of the mechanism of labor, the clinical course of labor, normal and abnormal labor, and the care of the new-born infant.

Part III. is devoted to a study of the normal and pathological puerperium.

The volume is well illustrated by photographic illustrations, all of which are original and well selected. There has been no attempt to present any detailed discussion of anatomy, physiology, or embryology. Since, to-day, practical obstetrics is founded on fact rather than on theory, the authors have wisely confined their

work to the exposition of practical obstetrics. The book's teachings therefore are pre-eminently clinical.

The chapters upon the mechanism of labor, and upon the management of normal and abnormal labor, are clear and concise, and will prove a valuable guide to the student, to whom a well-written and an accurate description of these subjects is essential.

The discussion of puerperal sepsis is remarkably clear, and has no uncertain sound in describing the clinical aspects and the treatment of puerperal infection. The work all through gives evidence of conclusions drawn from the author's experience, and we are sure that the plans of procedure recommended will be found valuable. There are few works on obstetrics that will leave in the student's mind a clearer knowledge of the means by which abnormalities are recognized and promptly treated. We recommend this work especially to medical students and to the rank and file of the profession who wish to avoid all theories and conflicting opinions, but who desire a reliable statement of the course to be pursued with a pregnant patient, or at the bedside of a woman actually in labor or presenting some complication in the puerperal period. R. C. N.

Notes on Surgery for Nurses. By Joseph Bell, M.D., F.R.C.S. (Edin.), Consulting Surgeon to the Royal Infirmary, and Surgeon to the Royal Edinburgh Hospital for Sick Children. Fourth edition, thoroughly revised, with an additional chapter of general advice to nurses. 12mo. Pp. 180. Cloth, 2/6. Edinburgh: Oliver & Boyd, 1895.

This little book is designed to embrace the main points of a course of lectures delivered for twelve years to the nurses of the Edinburgh Royal Infirmary. The style is conversational and the language shorn of scientific words, so that the salient features may be appreciated by the nurse taking up her work for the first time. The examples and explanations are in the same language, and refer to objects of every-day life, so that a beginner may appreciate them. We think, however, for nurses of more advanced standing the language could profitably be made a little more technical and scientific.

The chapter on General Advice to Nurses contains much that is applicable to the nursing profession in this country, although that profession on this side of the Atlantic is situated in so different an environment from the same profession on the other side of the water. J. M. S.

Spectacles and Eye-Glasses: their Forms, Mounting, and Proper Adjustment. By R. J. Phillips, M.D., Adjunct Professor of Diseases of the Eye, Philadelphia Polyclinic and College for Graduates in Medicine; Ophthalmic Surgeon to the Presbyterian Hospital in Philadelphia, etc. Second edition, revised. 8vo, pp. viii. 17–105, with forty-nine illustrations. Philadelphia: P. Blakiston, Son & Co., 1895.

Both the author and the publishers are to be congratulated upon the success that has attended the reception of this little work.

In a little more than three years' time it has been found necessary to bring out a new edition. Comparison with the first shows that much which is new and useful has been added. Whole pages of fresh matter have been inserted. New material upon such important subjects as the indices of refraction of glass used in spectacle making, designation of lens combinations, and methods of lens enumeration, have all been written upon. A more extended description of the plans pursued in the manufacture of lenses have been added, and an entire revision of the subject of prisms, so as to make it coincide with the present system of notation, has been made. Several new cuts and some useful tables have been inserted in the text.

The reviewer, who has had a most pleasant task given to him in carefully and critically perusing the pages of this little book, can do no better, in expressing his debt of gratitude for the benefit and profit that he has thereby derived, than to unhesitatingly recommend its purchase and study to every practical ophthalmologist who wishes to become conversant with this most frequently-neglected branch of ophthalmic science. C. A. O.

Manual of Gynæcology. By Henry T. Byford, M.D. Containing 234 illustrations. Philadelphia: P. Blakiston, Son & Co., 1895.

The author has prepared this manual of gynæcology to supply the student with a work for study and for reference in his college course, and to be used in the early years of his practice. An attempt has been made to simplify the subject by the use of two kinds of type,—viz., the larger type for essentials to which the student is expected to give his closest attention, and the smaller type for the addition of details that may be of advantage to the young practitioner beginning actual work in gynæcology.

The book is divided into ten parts, as follows: Diagnosis and details of gynæcological technique and treatment; development and anomalies of development; functional and nervous diseases; traumatic lesions of the genital tract; displacements; inflammatory lesions; genital tuberculosis; malignant diseases; tumors of the female organs; and ectopic pregnancy, pelvic hæmatocele, and pelvic hæmatoma.

We have read the book through, and on the whole find it an excellent textbook and a safe guide for those practising gynæcology as a part of their general work. We rather deprecate the use of tents and intra-uterine treatment as advised by the author, especially in the hands of the average recent graduate and of men whose practical knowledge of antiseptic and aseptic details is never sufficient to surround intra-uterine applications with safety.

The chapter upon uterine displacements is excellent. Operation for pelvic inflammatory disease through the vagina is given much prominence, and the cases to which vaginal section is applicable are clearly set forth. The technique of all the important operations for malignant diseases, for uterine fibroids, and for ovarian and parovarian tumors is clearly described and well illustrated. The details of preparation for operation and of the after-treatment are clearly given, and in each case the instruments to be employed and the steps of the operation are fully described. The volume has been carefully prepared by an author of large personal experience, and his directions for the care of gynæcological cases can be relied upon. The book is a useful manual and doubtless will have a wide circulation. R. C. N.

BOOKS RECEIVED.

W. B. SAUNDERS, Philadelphia.

An American Text-Book of Surgery, for Practitioners and Students. By Charles H. Burnett, M.D., Phineas S. Conner, M.D., Frederic S. Dennis, M.D., William W. Keen, M.D., Charles B. Nancrede, M.D., Roswell Park, M.D., Lewis S. Pilcher, M.D., Nicholas Senn, M.D., Francis J. Shepherd, M.D., Lewis A. Stimson, M.D., William Thomson, M.D., J. Collins Warren, M.D., and J. William White, M.D. Edited by William W. Keen, M.D., LL.D., and J. William White, M.D., Ph.D. Second edition, carefully revised. 8vo. Pp. 1248. Cloth, $7.00; sheep, $8.00; half Russia, $9.00.

A Manual of the Practice of Medicine. By George Roe Lockwood, M.D., Professor of Practice in the Woman's Medical College of the New York Infirmary; Attending Physician to the Colored Hospital and to the City (late Charity) Hospital; Pathologist to the French Hospital; Member of the New York Academy of Medicine, of the Pathological Society, of the Clinical Society, etc. With 75 illustrations in the text and 22 full-page colored plates. 12mo. Pp. 935. Cloth, $2.50.

The American Year-Book of Medicine and Surgery: Being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-books of the Leading American and Foreign Authors and Investigators. Collected and arranged, with critical editorial comments. By J. M. Baldy, M.D., C. H. Burnett, M.D., Archibald Church, M.D., C. F. Clarke, M.D., J. Chalmers DaCosta, M.D., W. A. N. Dorland, M.D., V. P. Gibney, M.D., Homer W. Gibney, M.D., Henry A. Griffen, M.D., John Guitéras, M.D., C. A. Hamann, M.D., H. F. Hansell, M.D., W. A. Hardaway, M.D., T. M. Hardie, B.A., M.B., C. F. Hersman, M.D., B. C. Hirst, M.D., E. Fletcher Ingals, M.D., W. W. Keen, M.D., H. Leffmann, M.D., V. H. Norrie, M.D., H. J. Patrick, M.D., William Pepper, M.D., D. Riesman, M.D., Louis Starr, M.D., Alfred Stengel, M.D., Thompson S. Westcott, M.D. Under the general charge of George M. Gould, M.D. Profusely illustrated with numerous wood-cuts in the text and 33 half-tone and colored plates. 8vo. Pp. 1183. Cloth, $6.50; half-morocco, $7.50.

HUDSON-KIMBERLY PUBLISHING CO., Kansas City, Mo.

Anomalies of Refraction and of the Muscles of the Eye. By Flavel B. Tiffany, M.D., Professor of Ophthalmology and Otology of the University Medical College of Kansas City, Mo., etc. Author's second edition. 8vo. Pp. 307.

J. B. LIPPINCOTT COMPANY, Philadelphia.

Therapeutics of Infancy and Childhood. By A. Jacobi, M.D., Clinical Professor of the Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York; President of the Association of American Physicians; Late President of the New York Academy of Medicine and of the Medical Society of the State of New York, etc. Pp. 315.

WILLIAM WOOD & CO., New York.

An Atlas of Ophthalmoscopy, with an Introduction to the Use of the Ophthalmoscope. By Dr. O. Haab, Professor of Ophthalmology, University of Zurich. Translated and edited by Ernest Clarke, M.D., B.S. (Lond.), Fellow of the Royal College of Surgeons; Surgeon to the Central London Ophthalmic Hospital; Ophthalmic Surgeon to the Miller Hospital.

F. A. DAVIS CO., Philadelphia.

Color-Vision and Color-Blindness. A Manual for Railroad Surgeons. By J. Ellis Jennings, M.D. (University Pennsylvania), formerly Clinical Assistant, Royal London Ophthalmic Hospital (Moorfields); Lecturer on Ophthalmology and Chief of the Eye Clinic in the Beaumont Hospital Medical College; Ophthalmic and Aural Surgeon to the St. Louis Mullanphy and Methodist Deaconess Hospitals; Consulting Oculist to the Missouri, Kansas and Texas Railway System; Fellow of the British Laryngological and Rhinological Association; Secretary of the St. Louis Medical Society. With illustrations. 8vo. Pp. 110.

WEATHER BUREAU, WASHINGTON.

CLIMATE AND HEALTH. Edited under the direction of Professor Willis L. Moore, Chief of Weather Bureau, by W. T. R. Phillips, M.D. No. 3, a summary of statistics for the four weeks ended September 28, 1895.

ITEMS OF INTEREST.

MR. HENRY TAIT[1] has promised Luke Fildes's picture entitled "The Doctor" to the new Westminster Gallery, London, as soon as the building is finished. The painting will be open then to the world for inspection and discussion. Meanwhile, all who have seen the etching or lithographs of this painting will be interested in reading the following quotation from an article[2] published recently by the editor of the *Art Journal.*

Luke Fildes's Picture "The Doctor."

"After many studies, Mr. Fildes had the interior of a cottage erected inside his own studio. This was carefully planned and properly built, with rafters and walls and window, all as afterwards expressed in the finished picture. The composition has been recognized by the medical profession as a great and lasting compliment to the whole body. No more noble figure than the doctor could be imagined,—the grave anxiety supported by calm assurance in his own knowledge and skill, not put forward in any self-sufficient way, but with dignity and patience, following out the course his experience tells him is correct; the implicit faith of the parents, who, although deeply moved, stand in the background, trusting their doctor even while their hearts fail. At the cottage window the dawn begins to steal in, and with it the parents again take hope into their hearts, the mother hiding her face to escape giving vent to her emotion, the father laying his hand on the shoulder of his wife in encouragement of the first glimmerings of the joy which is to follow."

It would be interesting to know from what source the striking portrait of the doctor himself was obtained.

At the recent meeting of the Association of American Anatomists a committee composed of Drs. Mears, Bryant, and Dwight[3] made an interesting report upon the subject of the preservation of anatomical material. The keeping of bodies by means of cold storage, a plant costing from five hundred to three thousand dollars, is believed to be the method which approaches most nearly to perfection. The bodies thus preserved should

On the Preparation of Anatomical Material.

[1] Review of Reviews, January, 1896.

[2] Art Annual, 1896.

[3] Science, January 17, 1896.

be injected before being placed in the cold storage. It is suggested that in large cities where several institutions exist one plant would suffice. Of all the anatomical laws upon the statute books of the various States, that of Pennsylvania is considered to give the most satisfactory results. One novel method of keeping the subject is as follows: inject with carbolic acid, one and one-half pints; glycerin, six pints; and alcohol, one and one-half pints. After the injection has been made the subject should be painted daily for fourteen days with one part carbolic acid to six parts of glycerin. It is then to be placed in an air-tight box over a jar of methylated spirits. By this method there is said to be an absence of odor from the body and a characteristic appearance of the tissues. Wickersheim's formula consists of three thousand parts of pure water, one hundred and nine parts of alum, twenty-five parts of chloride of sodium, twelve parts of nitrate of potassium, sixty parts of carbonate of potassium, and ten parts of arsenious acid; to ten parts of a liquid so prepared one part of methylic alcohol and four parts of glycerin are added. Formalin may be used in the proportion of from one-half to one per cent., though the odor is disagreeable and the effect upon the skin of the hand is annoying.

Changes at Jefferson Medical College.

A thorough overhauling of the affairs of the Jefferson Medical College has recently been made by the Trustees and Faculty. The chief changes are the establishment of a four years' graded course; the decision to remain in their former situation in the central portion of the city; the enlargement of the plant by the control of a large six-story building to the south of the college, for laboratory and clinical purposes; the salarying of the Faculty; and the creation of the chair of Ophthalmology, to which Professor Thomson was elected, and of the chair of Pathology, to which Dr. George Dock, Professor of the Practice of Medicine in the University of Michigan, was called, but which he has declined. At the twenty-sixth annual meeting of the Alumni Association the Society pledged themselves to equip the Pathological Department by raising at least ten thousand dollars.

The William Pepper Clinical Laboratory.

The William Pepper Clinical Laboratory was formally opened and presented to the University of Pennsylvania on Wednesday, December 4, 1895. The exercises were held in the amphitheatre of the University Hospital, and the occasion was notable for the presence of a large number of men prominent in the medical profession of this and other cities as well as of a number of distinguished members of the laity. The presentation was made by Dr. John S. Billings, who described the construction and the purpose of the building. Provost Harrison accepted the gift on behalf of the trustees. Dr. W. H. Welch, of Johns Hopkins University, made an address, giving an

account of the development of original scientific research on the problems presented by the human body and describing the evolution of clinical laboratories. The object of the laboratory is to provide an airy, commodious, and comfortable structure, in which it shall be possible to work out the various problems connected with the etiology, pathology, anatomy, and bacteriology of disease. Original work will be done by an efficient corps of associates in craniometry, chemistry, bacteriology, urinology, hæmology, and morphology. There will be no undergraduate teaching in the building. Dr. Pepper is the director, and he will devote a part of his personal time to working in its laboratories. The assistant director is Dr. Alfred Stengel.

Imperial University of Japan.

The calendar of the Imperial University of Japan for 1894–95 shows that it ranks among the great universities of the world. All the schools are represented; there are laboratories, hospitals, and museums, an astronomical observatory, a seismological observatory, botanic gardens, a marine biological station, etc. The number of students is as follows:

University Hall	94
College of Law	432
College of Medicine	175
College of Engineering	229
College of Literature	179
College of Science	98
College of Agriculture	261
Total	1468

There are fourteen full professors in the college of science, and a majority of those registered in University Hall are engaged in scientific research. A large part of the work accomplished is published in the *Journal of the College of Science*, which maintains a high scientific standard.

Dr. Jameson.

Dr. J. Jameson,[1] of Transvaal fame, is a Scotchman, forty-three years of age, his medical studies having been pursued in the University College. Entering this institution in 1870, he became a member of the Royal College of Surgeons in 1875, and graduated as an M.B. and B.S. in the University of London in the same year, receiving the degree of M.D. in 1877. As house-surgeon under the late Professor John Marshall, house-physician under Sir Russell Reynolds, and resident medical officer to the University College Hospital, his early medical training started off propitiously. As a young man Dr. Jameson gave evidence of the same personal magnetism which has so endeared

[1] British Medical Journal, January 11, 1896.

him to all sorts and conditions of men; of generous instincts, though impulsive, there was nothing ignoble about him. Sir Cecil Rhodes, King Lobengula, and President Krüger have been patients of his, and all seem to be very grateful for the services rendered them during severe illnesses.

Mrs. Willard and the Metropolitan Trained Nurses' Club.

By the executive ability of Mrs. Willard, the Metropolitan Trained Nurses' Club,[1] situated at No. 104 West Forty-second Street, New York City, is an assured success. The club has recently been incorporated, and its membership is nearly one hundred. The nurse seeking employment, or desiring to rest after serving through a trying illness, is here able to obtain board and lodging for a sum within her means. It is Mrs. Willard's hope that in the near future a suitable building can be erected for the purpose, and that the club will always be composed of the best nurses that live in New York City. At the Home Bureau, 15 West Forty-second Street, besides being able to secure dainty dishes for the invalid, you may rent all articles necessary for use in a sick-room.

State Medical Examinations in New York.[2]

Examinations for license to practise medicine in the State of New York will be held on April 7 to 10, May 19 to 22, and June 16 to 19, 1896. The examinations will be held in New York City, Albany, Syracuse, and Buffalo, and each candidate is notified as to the exact place.

On Tuesday mornings the examination will be in anatomy; Tuesday afternoons in physiology and hygiene. On Wednesday mornings the examination will be in chemistry; Wednesday afternoons in surgery. On Thursday mornings the examination will be in obstetrics; on Thursday afternoons in pathology and diagnosis. On Friday mornings the examination will be in therapeutics. The morning hours are from 9.15 until 12.15, and the afternoon hours are from 1.15 until 4.15.

Newspaper Account of a Trial.

"Peter Burggraf's suit[3] against Health Commissioner Z. Taylor Emery and Dr. Frank E. Boyden for five thousand dollars damages, based on the death of Mr. Burggraf's nine-year old daughter Julia, said to have resulted from vaccination, was continued yesterday before Judge Van Wyck and a jury in Part I. of the Supreme Court. Dr. Alvin H. Schwab, the family physician, said that 'the girl died from lock-jaw caused by the *infusion of dirt into the blood.*' A. H. Van Cott, the counsel for the Health Board, said that physicians

---

[1] Illustrated American, January 11, 1896.
[2] Buffalo Medical Journal, December, 1895.
[3] New York Tribune, January 11, 1896.

knew that there was a disease germ *peculiar to* [prevalent in] Long Island which would produce lock-jaw if it was absorbed by the blood." It may be added that the jury disagreed.

Medical Department of Vanderbilt University.

The Medical Department of Vanderbilt University was reorganized last spring. A new faculty was elected and a graded course of three years was adopted. The faculty consists of ten professors and twenty instructors, lecturers, and assistants. Dr. William L. Dudley is dean of the faculty and Dr. Richard Douglas secretary. Dr. W. M. L. Coplin, late of Jefferson Medical College, Philadelphia, fills the chair of pathology and bacteriology. The department has removed, this session, into the Medical College building, lately erected and furnished at a cost of seventy thousand dollars.

The Bacillus of Syphilis.

The reported discovery of the bacillus of syphilis in the blood by Dr. van Niesser, of Wiesbaden,—not the one described by Lustgarten,—requires further confirmation before much attention should be paid to the announcement.

Changes in the Medical Press.

Among the many recent changes in the medical press, we note with special pleasure the revival of the *Index Medicus*, and the starting of a new scientific quarterly entitled the *Journal of Experimental Medicine*, which is to be edited by Professor W. H. Welch, of Baltimore, and published by D. Appleton & Co., of New York City.

NOTE TO CONTRIBUTORS.

AUTHORS will receive liberal compensation for accepted articles after publication; or reprints, if stated on the manuscript, will be furnished in lieu of the honorarium. It is distinctly understood that all articles appearing as original matter are for our exclusive use, and are not to be reprinted or to appear in any other publication excepting the Transactions of the Society before which the paper may have been read. Illustrated papers are especially desired.

All matters of business, as well as subscriptions, should be sent to the INTERNATIONAL MEDICAL MAGAZINE COMPANY, 716 Filbert Street, Philadelphia.

Manuscripts, exchanges, and books for review should be addressed to the Editorial Office, 3709 Spruce Street, Philadelphia.